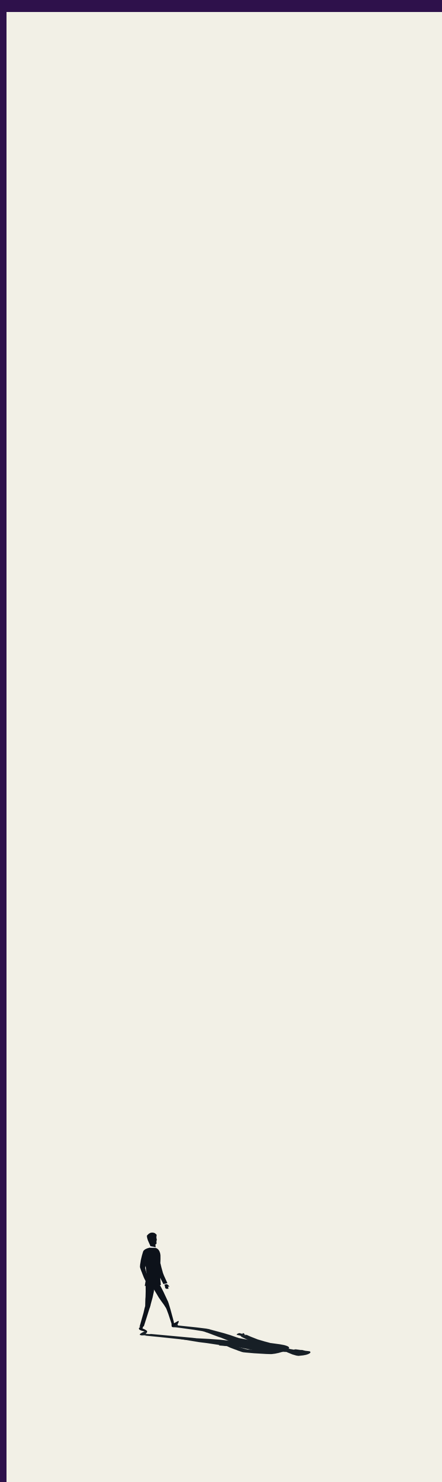
the hedge fund journal



2022

Tomorrow's *Titans*

Introduction

Fifty Rising Stars

HAMLIN LOVELL

T*he Hedge Fund Journal* has been publishing the Tomorrow's Titans report since 2010, initially once every two years but now annually thanks to growing interest from the industry.

The 2022 report highlights several industry trends including: varied manager career backgrounds; growing launch activity away from major hedge fund centres and especially in Asia Pacific; various "quantamental" strategies; more minority-owned managers; multiple ESG strategies; various seeding models; and a broad spectrum of service providers supporting younger funds.

Many of the launches here came from hedge fund/alternative asset managers or family offices running more than $10 billion, such as Blackstone, Brevan Howard, Citadel, Fiera Capital, GMO, Itau Asset Management, King Street, Macquarie, Man Group/GLG, Marathon, Moore Capital, Millennium, Paulson & Co, Point72, Tudor and York Capital. Some firms sprang out of medium sized firms such as Adelphi Capital, Enko or Fir Tree Capital Partners and the two biotech managers featured in this year's report were previously at other healthcare specialists. Other managers started their careers at predominantly long only traditional fund managers, such as Aramea, Brown Brothers Harriman, Fidelity, National Bank of Canada, Nomura and Swisscanto. Another group moved into hedge fund management from a market making or proprietary trading background in banks or dedicated firms, which range from regional options specialists in Israel or the US to global investment banks such as UBS or Goldman Sachs. One of the quant managers in the report was previously an eminent astrophysicist in academia and another is an official startup from the University of Zurich.

> "The 2022 report highlights several industry trends including: varied manager career backgrounds; growing launch activity away from major hedge fund centres and especially in Asia Pacific; more minority-owned managers."

Off the beaten track

It is easiest to find newer managers in the major hedge fund centres such as London and New York, but there are plenty of interesting launches in other locations. In North America, we have found them in other significant financial centres such as Boston and Chicago, but also in Austin and Dallas, Texas; St Louis, Missouri; Charlottesville, Virginia; and Snoqualmie, Washington State. In Canada we have managers in Montreal, Quebec and Winnipeg, Manitoba. Some of the smaller US managers might be regulated by a local regulator in say Massachusetts or Utah, rather than by the SEC, and in Canada the model is anyway to be registered with the local province. In Europe and the Middle East, London is the largest market, but we have identified interesting managers in Hamburg, Germany; Linkoping, Sweden; Cyprus and Israel, as well as in other major financial hubs such as Zurich, Switzerland.

Asia Pacific

For years it has seemed anomalous that Europe's hedge fund assets dwarf those in Asia Pacific, when its economy and financial markets are many times larger and growing much faster. This balance is partly being redressed through large volumes of launches, and we have featured one manager in Shenzhen, two managers in Hong Kong, two in Singapore and two in Australia, covering a wide range of strategies: discretionary equity long/short; equity market neutral; global emerging markets credit; discretionary macro; fixed income and credit arbitrage; volatility arbitrage and cryptocurrencies. Some of these strategies are wholly or mainly focused on local financial markets but the majority of them invest globally.

Quantamental

Most of the managers are either discretionary fundamental or systematic, but at least seven of them brand as "quantamental" and there are different ways to define and apply this. Sometimes there are both fundamental and quantitative stages or filters in the process, and in other cases the two approaches are integrated. In any case, even those managers who market as discretionary fundamental are making extensive use of quantitative tools for gathering, aggregating, cleaning and analysing data ranging from alternative data in China to merger arbitrage milestones or ESG data.

ESG
At least ten of the strategies managed are explicitly ESG in some form, though the exact definitions, approaches and policies are nuanced. ESG is most often seen in equity market neutral or equity long/short but we also highlight high yield credit and global macro strategies, as well as dedicated carbon trading strategies. There is no one size fits all for ESG since approaches to exclusions, shorting bad corporate actors, scoring and rating, corporate engagement and activism, proxy voting, and positive impact, vary between managers – as do ways of measuring key metrics such as firm and portfolio carbon footprints. And even where other managers do not explicitly label their strategies as ESG, it is often an increasingly important part of their investment and risk process. We say "at least" ten ESG strategies because ESG is evolving very rapidly and it is probable that more strategies will be reclassified as "ESG" over the coming months and years. For instance, some managers await clarity on European rules before making changes such as disclosures under SFDR category 8.

Minority ownership
Allocators' ESG policies are also paying attention to diversity in asset managers' staff. At least six of the managers featured here have chosen to classify themselves as "minority owned", of which two are led by women. Another three managers are co-founded and/or co-managed by women. A larger number of the managers have ethnically diverse founders, most often from India or China but also some from Turkey and elsewhere, but are not currently categorizing themselves as "minorities".

Seeding models
Most of the Titans have set up their own management company, but a few have rolled out new strategies with established managers such as Eckhardt Trading Company or Lighthouse Investment Partners. Some of the managers have raised assets from providers of incubation, seed and acceleration capital, such as Trium Capital, Investcorp-Tages, Stable Capital, or Borealis Strategic Capital Partners. Other investors such as Canadian pension funds, which participate in the Quebec Emerging Managers Program, can also be active in seeding. Some funds have been seeded by wealthy individuals, such as fund manager Alex Waislitz in Australia. The majority have launched with proprietary, personal or friends and family capital, or family office capital. Most of them are running comingled funds though a few are imminently launching them, while a handful are sticking with managed accounts for now. Some of the managers here could be open to acceleration capital deals with the right cultural fit: they are generally looking for broader business support and synergies that go beyond an infusion of capital. In some cases, they may seek seeding for a second or subsequent strategy.

Service providers
There are reports of some prime brokers or administrators setting minimum levels of assets or revenues for onboarding, though we also see many prepared to take a positive view on the growth prospects of selected newer and smaller managers who may start with modest levels of assets. Prime brokers serving these funds include some of the largest European and US headquartered firms such as BNP Paribas, Goldman Sachs, Morgan Stanley, Société Générale, and UBS and JP Morgan, both of whom have dedicated incubation programs; mid-tier firms such as Jefferies, BTIG, and Interactive Brokers are also quite popular with smaller funds. In some regions the natural choice for a first prime broker might be the local market leader, such as SEB in Sweden. On the administration side, the largest firms such as Northern Trust and SS&C are working with newer funds. Smaller firms such as AK Jensen Group or Apex Fund Services in Europe, and Sudrania or NAV Consulting in the US, also have a healthy appetite for emerging managers.

While conventional asset classes and the classic 60% equities, 40% bonds mix have spectacularly disappointed investors in the first half of 2022, hedge funds as a whole have done their job and delivered moderately positive returns. The outlook remains constructive for a continued resurgence in hedge fund launch activity.

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Kojo Amoo-Gottfried

Founder and CIO
Black Stars Investments
London

Black Stars Investments (BSI) is named after the black star – a concept of diversity, independence and strength. The aim is to transfer such ideals to the investment management sphere. The Black Stars Emerging Markets Fund, which launched in April 2021, targets double digit returns with low volatility by investing in emerging markets fixed income. It opportunistically invests long and short across emerging and frontier markets, including in Africa, Middle East, Asia, Latin America and Eastern Europe. The strategy covers credit, rates and currencies. The focus is on liquid public markets, where BSI seeks out structural inefficiencies, deep value trades, long-term growth and convergence plays. Various instruments can be used for shorting even within frontier markets. While confident on emerging markets, not all countries will be successful hence the short side is also important. Amoo-Gottfried believes that economic growth combined with strong macroeconomic and demographic fundamentals mean that some emerging markets sovereigns have higher credit quality than the consensus perception and are mispriced. His perspectives on ESG include that Africa has the lowest carbon emissions of any continent. Prior to launching BSI, Amoo-Gottfried was an award-winning emerging markets senior portfolio manager at Enko Capital, where he launched a debt fund and made successful contrarian investments. He earlier ran a fund at FM Capital Partners. His career started in investment banking, including capital markets and proprietary trading. He is a graduate of the London Business School and the London School of Economics.

Blago Baychev

Co-Founder and CIO
PharVision Capital LP
New York

PharVision Capital launched in March 2021 and has grown regulatory assets under management to $300m as of July 2022. PharVision has built its own model to minimise factor exposures and ensures that at least 80% of returns come from stock-specific sources. The strategy has made high-teens return over its first 15 months and was positive for 2022 to May. It uses a machine plus man approach. The process includes cleaning traditional data, alternative data gathered through proprietary scraping and niche vendors, and machine learning. It is also grounded in economic reasoning. The firm is expanding its datasets, research models, and team. Baychev was previously a trader at Citadel Global Equities in Chicago responsible for long/short market neutral execution, risk and portfolio management, data analysis and operations, helping supervise substantial assets in the consumer, TMT and healthcare sectors. Before Citadel, he worked for the Morgan Stanley Quantitative & Derivatives Strategies team in New York developing systematic equity derivatives strategies. He has a BA in Mathematics & Economics from Lafayette College in Easton, PA.

Nick Bird

Founder and CIO
Wolver Hill Asia Absolute Alpha Fund
Hong Kong

Nick Bird partnered with Wolver Hill in 2020 to launch a distinctive Asian equity market neutral strategy that has generated a Sharpe ratio of 2 between June 2020 and May 2022. To describe it as a "non-systematic quant investment methodology" is not an oxymoron. Non-linear screens identify mis-pricings, and combinations of value, growth, momentum, sentiment and certainty factors, but roughly half of historical returns have come from a proprietary discretionary overlay using various criteria not captured by the quant screens, including regulation, unique events and crowding. The portfolio is built using a constrained optimization process that maximises exposure to alpha-based screens while controlling risk factors. Realised beta of zero is targeted, though it has recently been negative and the strategy has also been negatively correlated with hedge funds and quant hedge funds. The investment universe includes Japan, Greater China, Singapore, South Korea, Australia and New Zealand. Bird previously headed Macquarie Bank's Quant Hedge Funds Group, from where former colleagues, Wilson Au and Zicai Feng, have joined Wolver Hill. Bird has a BCom in Information Systems from University of South Wales and is a CFA charterholder.

François Bourdon

CIO
Nordis Capital
Montreal

Nordis was seeded in 2021 by the Quebec Emerging Managers Program, which is backed by one of the largest Canadian pension funds and the local government, after piloting the strategy since June 2020. The firm invests in global equities, and occasionally in credit and commodities as well as carbon credits. It offers long/short, market neutral and short bias strategies, which identify megatrends and themes including energy transition, natural capital, healthcare, education, diversity, renewable energy, recycling, food sustainability and pollution control. Short positions have included Doordash, Coca-Cola, AMC Entertainment and Robinhood Markets. There have also been some pairs trades such as uranium maker Cameco versus oil firm Petrobras, and Microsoft versus Facebook. Energy company Total has been owned based on its credible transition plans versus Exxon Mobile. The team's backgrounds include global macro trading, economic policymaking and research, ESG research and consultancy, carbon transition and impact investing. The firm believes that fiscal policy is increasingly relevant for implementing ESG. Bourdon was previously global CIO of Fiera Capital Corp, Canada's largest independent asset manager, where Nordis portfolio manager, Craig Salway, also worked. Bourdon has a BMath from Concordia University in Montreal, is an actuary and a CFA charterholder.

Andre Caldas

Partner and Equity Portfolio Manager
Clave Capital
Rio de Janeiro/Sao Paolo

Andre Caldas co-founded Clave Capital in May 2021 with a former colleague from Itau Asset Management, Rubens Henriques. BTG Pactual holds a minority stake in Clave, which has assets under management of circa 6bn BRL ($1.1bn). The firm is a platform offering various hedge fund and long only strategies, each led by its own CIO. Strategies include global macro, systematic, growth equity and special situations. Caldas leads the equity total return strategies, which blend bottom-up fundamental equity analysis with top-down macro inputs from the macro and systematic teams at Clave. Caldas previously co-managed the Itau Hedge Plus and Itau LS Plus long/short strategies at Itau. He earlier managed the Credit Suisse LS Premium Fund and was previously a portfolio manager at Copernic. He earlier worked for Ambev and Guarantee Bank. He holds a BS in Computer Science from UFRGS in Brazil and an MBA in Finance and Finance Management from MIT. He is a CFA charterholder.

Louis Camhi

Founder and CIO
RLH Capital
New York

Louis Camhi founded RLH Capital in September 2021 to take advantage of opportunities in the SPAC market. RLH Capital is US focused and key strategies include traditional SPAC arbitrage, buy-writes, warrant arbitrage, option writing, and event-driven SPAC and DeSPAC trades based on catalysts such as closings and PIPE registrations. Camhi works with a network of SPAC sponsors and advisors. He maintains a database of all SPACs in order to facilitate discovering attractive investment opportunities including unique transaction structures such as bonus share adjustments. The strategy is initially focused on public markets but is fluid and opportunistic: it could do PIPEs later on, and may add sub-strategies such as non-redemption agreements. Interestingly, Camhi sees a growing opportunity set as the fund scales. Camhi was previously an analyst running a market and factor neutral strategy at Citadel's Surveyor Capital and earlier at long/short equity fund, Three Corner Global Investors. His career started as an investment banker for Credit Suisse in the M&A group. Camhi sits on the board of Canadian-listed cannabis point of sale and payments technology company, POSaBIT (CSE: PBIT, OTC: POSAF). He has a BS in Finance and Accounting from NYU Stern.

Kristin Carlin/ Sandra Myburgh

CIO and CEO
FERN Impact Partners LLC
New York

FERN Impact Partners is an ESG and impact multi-fund manager established in 2018 by industry veterans Sandra Myburgh and Kristin Carlin. FERN's investment platform is designed to outperform benchmark returns with a focused portfolio of high-scoring ESG and positive impact themes. FERN's proprietary FIT investment process merges fundamental, impact (ESG) and technical analyses with risk-mitigating macro hedges. In 2022, FERN's long/short hedge fund is up 13% (net) for H1. FERN also manages three low carbon long only ESG portfolios: international all cap, international small cap and global impact innovation; each outperforming their respective benchmarks. FERN further distinguishes itself by allocating up to 50% of performance fees to social impact projects that achieve sustainable, measurable outcomes. Carlin brings 27 years of investment expertise. She was portfolio manager and Head of Trading/Research with Harvey Eisen's Bedford Oak Partners, managing more than $500 million in equity hedge strategies for 12 years. She started her career as a trader on the institutional equities trading desk at Prudential Securities studying technical analysis under Ralph Acampora. Carlin holds a BS in Psychology from Alfred University. Myburgh most recently led hedge fund investment due diligence for Barclays Private Wealth Management. She has a 28-year history working on three continents in trading/structuring roles for institutions such as Barclays, Standard Chartered, ABN AMRO and Rand Merchant Bank. Myburgh has a Bachelor's in Information Technology and a Master's in Economics from University of Johannesburg.

Richard Evans/ Oliver Davey

Co-Managing Partner and CIO/Co-Managing Partner and Head of Risk and Trading
Mara River Capital
Dallas, Texas

Richard Evans co-founded Mara River with Oliver Davey in 2019. Mara River runs a global book of 30-40 small and mid-cap investments, though there are caps on position and industry exposures. They seek special opportunities with at least 40% upside, though 60-80% is more typical. Mid-caps are attractive due to historically higher earnings growth and little or no sell side research coverage, meaning Mara River can fill the void with bottom-up primary research. Investment theses can be based on structural growth, conglomerate discounts, turnarounds, corporate activity and deleveraging. The main sector focus is consumer, IT, industrials, materials and real estate, predominantly in the US, Europe and UK. Value expressions of environmental opportunities are a current favourite theme. The strategy can use options and warrants and there are also some index and ETF hedges and alpha shorts. Evans previously worked at King Street (Europe), investing throughout the capital structure, alongside Davey between 2008-2011, whose recent experience was at Panning Capital and Lucidus Capital. Evans has a BA in Accounting and Finance from the University of Warwick and is a chartered accountant. Davey has a BA in Economics from the University of Cambridge.

Josh Gennet/ Tristan Elwell

Founders
ECO Advisors
London

Josh Gennet and Tristan Elwell launched ECO Advisors to manage a global equity market neutral UCITS strategy that uses proprietary ESG analysis and data science to drive absolute return. The strategy also employs extensive engagement and proxy voting. Longs are best in class or improvers from a ESG perspective, while shorts show poor or declining ESG profiles. Philosophically, ECO argue influencing costs of capital can incentivize better corporate ESG behaviour. The long and short books, each containing circa 150 stocks, are ranked on a range of ESG metrics such as carbon emissions; corporate governance standards; corruption and instability; health and safety policies; HR policies; and waste management. The strategy has met its single digit return target, delivering alpha on long and short books, with minimal style factor exposures, low volatility and near zero beta to equity and bond markets. Gennet previously worked in Barra portfolio analytics at MSCI, derivative sales at BNP Paribas, and quant strategy and derivatives trading at Morgan Stanley. Elwell was formerly partner and CRO at Adelphi Capital and senior technical analyst at Fidelity Investments. Both studied at the London School of Economics and Gennet has a BA in Mathematics and Economics from Yale.

Parisa Golestaneh

Founding Partner, CIO and Portfolio Manager
VesperMare Capital LP
New York

Parisa Golestaneh founded VesperMare, the anglicised name of a character in Persian mythology, in 2021. VesperMare is a majority owned MWBE (Minority and Women Business Enterprise), which runs an emerging market macro strategy that invests long and short in sovereign credit, rates and currencies in emerging and frontier markets, including some markets outside emerging markets indices. The investment process blends macro themes with micro country level credit and economic analysis and uses proprietary sovereign scoring models that combine quantitative, qualitative and ESG factors. Ideas are implemented through liquid cash markets and both developed and emerging market derivative markets. The firm's emerging market tactical and total return strategies started trading in December and November 2014 respectively when Golestaneh was a portfolio manager at NWI Management, where she worked with VesperMare's Head of Research, Adam Weiner. She was earlier Head of Emerging Markets at Blackstone Alternative Asset Management. Prior to that, she was a global macro emerging markets portfolio manager at FrontPoint Partners and BTG Pactual. Her finance career started in emerging markets structuring, hybrids and investment at JP Morgan. She has a BA in Economics and Applied Maths from Barnard College and Columbia University.

Christian Baylis

Multi-faceted fixed income and credit alpha

Founder and CIO
Fortlake Asset Management Pty
Sydney, Australia

Fortlake fuses two words: *fort*, meaning strength and security, and *lake* symbolizing peace and calm, which also sums up the firm's objective of generating strong risk adjusted absolute returns. Its hedge fund product, Fortlake Sigma Opportunity Fund (FSOF), is designed for equity refugees and targets returns of 7-10% with volatility of 5%, implying a Sharpe ratio of 1.5 to 2. The realized Sharpe since inception has been nearer to 4, and Christian Baylis' prior track records at UBS also generated high Sharpes. Fortlake also offers lower volatility strategies, which can cater for retail investors.

Baylis previously managed billions for UBS, including inflation-linked mandates, ran currency reserves at Australia's central bank and has also worked for S&P on structured products. His earlier PhD in inflation forecasting and option probabilities laid the analytical foundations for some facets of the strategy, and informs part of the investment philosophy, which ambitiously sets a target of keeping pace with inflation – even in June 2022 when developed market real interest rates were deeply negative. This encourages some investors to reach out into private and structured credit for illiquidity and other premiums, but Baylis does not believe this is necessary. He judges that the current strategy, focused on mainly investment grade government, inflation, corporate and mortgage cash and derivative markets, in the US, Europe and Australia, can meet investors' return targets, and is also scalable to at least $10 billion of assets.

Baylis' vision for Fortlake is to create an alternative fixed income solution for both the Australian market and global fixed income, which generates alpha from multiple angles: "If you are siloed into one asset class like plain vanilla cash bonds and tied into one market, there is one degree of freedom. We are pulling more levers: we have multiple markets and instruments to choose from, which creates at least 30 sources of alpha, of which many are not correlated. The interposing philosophy considers relationships between all value buckets, including rates, inflation and credit, blending all value drivers. We see other fixed income and credit teams being much more siloed by asset class," says Baylis.

Novel corporate structure and diverse team

Starting a brand-new firm from scratch with such a wide purview requires capital, balance sheets, infrastructure and relationships. To hit the ground running from day one, Fortlake conceived an unusual structure with three strategic partners and one seeder. JP Morgan prime brokerage's incubation program provides clearing and repo lines; Tactical Global Management acts as outsourced middle and back office; and ASX listed firm IAM is the distribution partner, also handling administration and some investor relations functions. Seed capital comes from renowned Australian billionaire small cap and tech fund manager, Alex Waislitz.

The team is diverse. Three of Fortlake's four investment professionals, including Deputy Chief Investment Officer and Chair of the Investment Committee, Dr Kylie Anne-Richards, are women. Baylis believes this is unique in Australia, particularly in roles involving trading, quantitative skills and coding, which are still heavily male-dominated to this day. It is partly a function of happenstance, while a deep bench of women also helps maintain diversity and improves diversity and inclusion more generally. "The most recent studies show that it will take another 111 years – or until 2133 – to close the gender equality gap globally based on the current rate of progress. Achieving gender equality isn't just a moral issue – it makes economic sense. There has been considerable focus on women on boards, and whilst this is critical, we cannot rely solely on this and need to look at adopting a solid diversity strategy across all rungs of the ladder. Having three women on the team at different ages and stages bolsters the other women here and helps us retain the talent within the team. Women still bear the brunt of childcare responsibilities and home care duties. Having flexible working policies and a supportive and inclusive work culture goes a long way to ensure we retain the talent within the team and for the longer term," says Baylis.

Relative value and directional

The strategy combines fixed income and credit arbitrage style trades with more traditional directional global macro style trades, and for all ideas, trade structuring can involve a variety of linear and non-linear instruments.

In relative value strategies, default arbitrage, between indices, tranches, and parts of tranches, mainly on CDX and ITRAXX in the US and Europe, has been an important driver of returns, and this strategy can even be offered on a standalone basis in customized mandates.

Ahead of the curve on inflation

Directionally, the inflation thematic has been a good call for Fortlake. "We have had a very bearish stance, well above consensus, since the firm started. We took the view that inflation was far from transitory, as it starts to permeate the psyche and ratchet up expectations. Covid wiped inventory clean while enforced savings created pent-up demand, and more money was printed over 18 months in the pandemic than in the prior 10 years. Less labour migration, China lockdowns, supply chain issues and the Russian invasion create a perfect storm. Anticipatory inflation is already seen in the consumer psyche, and this could lead to wage-price spirals," says Baylis.

He is confident about the direction of travel – but also sees a huge margin of error in forecasting and has a different philosophical and statistical approach to many economists and investors. "After a one in one-hundred-year pandemic, there was going to be huge degrees of uncertainty in forecasting with a wide distribution of outcomes. Central bankers who look at the world stochastically, applying probabilities to previous states of the world, thought that forecast errors would remain tight and with historical mean reversion. But after a unique pandemic, with an isolated and totally variant outcome, it is really dangerous to get excited about forecasts. Rather than rely on mean reversion, it is better to be much more dynamic on monetary policy, like delta hedging a position. In a situation like this, we use Monte Carlo simulations rather than relying on a past viewpoint. We also employ risk-based forecasting, having authored a paper on the topic," says Baylis. Baylis takes the view that basing monetary policy on a central base case path is risky given the huge errors entailed in estimating the natural rates of unemployment and inflation and the long- and variable-time lags before monetary policy takes effect. Therefore, it is better to iteratively adjust policy – and investment strategies – in response to events.

Inflation instruments and inter-relationships

The firm has been actively trading zero-coupon inflation swaps and caps in the G7, and paying close attention to the inflation curve. "The front end of the curve has already repriced, so we are moving along the curve to areas where it is inverted, implying market expectations of inflation being transitory and mean-reverting. Around the five-to-seven-year part of the curve, we can get positive carry and some roll down, which helps to fund inflation hedges," says Baylis.

There are different opinions about how the flat yield curve balances growth and inflation expectations, and Baylis is biased towards inflation: "We expect that yield curves could steepen toward the belly of the curve as inflation expectations rise further out the curve, and not necessarily due to higher expectations of economic growth".

The inflation trades also dovetail with other parts of the book, including credit and nominal rates. "We also use the inflation risk premium at the front end of the curve to help fund our credit book, based on the cointegration between inflation and credit," says Baylis. Inflation views have also been expressed through nominal rates curves, including front-end steepeners. There has also been some short-duration exposure, within the tight range of plus or minus three years, implemented through a volatility strategy involving straddles.

High yield, swaps and cross-asset class trades

High yield can be played through high yield indices and tranches or total return swaps when they offer better value. "There has also been some short volatility exposure on the credit side, selling receiver swaptions on high yield and crossover. Swaps spreads are another potentially uncorrelated source of alpha," says Baylis.

Other asset classes, including currency and equity, are monitored for implied volatility signals, and sometimes the equity VIX index can be traded as a substitute for credit hedges. Relative value between equity and credit volatility can also be traded.

FSOF could trade structured credit such as RMBS, CDO, CLOs, but Baylis does not think it currently offers a sufficient illiquidity premium. In any case, such positions would be sized small.

There are a wide variety of trades, which can typically involve 3 or 4 legs, but the 800-position tally overstates the number of line items since it includes underlyings of indices. Derivative relative value trades can entail substantial notional leverage, but this is capped at 400% for FSOF.

ESG

Fortlake excludes some sectors such as thermal coal and controversial weapons from both long and short books. ESG is also integrated into the investment process as a source of alpha and risk management. Fortlake calculates an ESG rating from the worst score of zero to a best of five, and this also translates into an estimated credit spread measured in basis points, which could be positive or negative. "That, in turn, allows overall credit spreads to be bifurcated between an ESG risk premium and a pure credit risk premium," says Baylis. He has observed "green bonds" with tighter spreads, and reckons this is because their investor base tends to be more stable and long-term. Fortlake has invested in some green bonds and is open-minded about social, sustainability-linked and carbon-linked bonds where costs of capital can be linked to ESG performance, though he has not yet seen many such issues in Australia. "Poor ESG can contribute to short investment theses, such as baskets of airlines, or other positions which have challenges around governance or social factors," he adds.

Macro outlook

Baylis sees consumer preferences for sustainability as one source of inflation, and he does not think it will be easy for central banks to engineer a soft landing. He sees a high risk of central banks making policy errors, with negative outcomes for inflation, the economy, or both. He draws some parallels between 2022 and the 1970s and sees no reason why inflation could not go higher, given the very large bounds of uncertainty: "UK inflation calculated using the 1970s methodology would already be in the teens. Real interest rates are deeply negative, by 7% in the US and 4% in Australia. Europe is still stimulating the economy despite inflation. It has real interest rates of minus 8.6%, more than 10% below the neutral rate of 2.5%. Recession or slower growth is mathematically a higher probability since we have brought forward future consumption". He does not however necessarily expect a stagflation scenario of recession and inflation but rather foresees slower economic growth combined with inflation as most likely, as inflation itself is already starting to dent demand in the economy.

Meanwhile, central banks do not have much ammunition to stimulate the economy. "Previous crises were easier to deal with because they were all disinflationary, whereas the current situation is inflationary, with real interest rates already well into negative territory," says Baylis. The financial market impacts of the economic environment could also be exaggerated due to a reversal of central banks' role, from captive buyers to forced sellers of financial assets. "In developed markets, they have gone from being non-commercial buyers with a huge impact on rates, inflation and credit, to effectively being non-commercial sellers," says Baylis. In emerging markets, some of which have huge pools of capital, geopolitics adds another dimension where fear of potential sanctions could encourage divestment of western assets that might be vulnerable to freezes or confiscation for political reasons. "The US freezing of FX reserves makes it harder to fund current account, fiscal and trade deficits. Sovereigns and wealthy individuals in emerging market countries may think twice about buying US Treasuries if their security depends on Western ideology," says Baylis. These forces are already driving up risk premiums and dispersion thereof, especially for sovereign spreads in Europe.

A compelling sandpit

Fortlake's distinctive risk management approach demands that incremental risk taking needs to improve forecast risk-adjusted returns. "This means we normally get less busy as the Sharpe goes up. Running a Sharpe of 4 sets a very high bar for any new trades, but in June 2022 the opportunity set was compelling. There has been a huge repricing and total recalibration of interest rate risk by 5 or 6 standard deviations. Credit spreads and their volatility have also doubled. Sharpe opportunities are now much greater. The sandpit is full of toys at the moment," says Baylis.

Customized mandates

The investor base was wholly Australian on day one, but now 60% is from outside Australasia, and Fortlake is in contention for allocations to its comingled funds and customized strategies. Customized mandates could calibrate the strategy to credit beta targets; focus exclusively on sub-strategies such as default arbitrage, or concentrate on geographies and segments such as European investment grade.

Founder and CIO
DSC Meridian Capital
New York

Sheru Chowdhry

Climate engagement enhancing returns in corporate credit

Sheru Chowdhry launched and seeded his own firm, DSC Meridian Capital LP (the initials DSC belong to his late father), in 2018 with working and investment capital, and assembled a team with deep and broad experience.

"I have known two of my partners since 2003. My partners and I have led the restructuring of over 100 companies over the course of our careers, in North America, Europe and Latin America, giving DSC Meridian experience on par with larger and more seasoned funds," says Chowdhry.

As Head of Credit Research and Co-Portfolio Manager at Paulson, Chowdhry helped to build a credit business running peak assets of $15 billion, which generated billions of profits for investors and laid the foundations for his versatile style of investing. "I am tremendously grateful to John Paulson for giving me enough rope to learn and lead his corporate credit franchise at a young age. The principal lesson learned was that credit in general is very cyclical while stressed and distressed credit is even more so. In high yield markets, there are times to make money and times to avoid losing money. Investors must implement a nimble approach to portfolio construction. If we can protect capital and minimize drawdowns during major corrections, and then pivot to play offense at the bottom of the cycle, we should be able to handily outperform high yield over a market cycle," explains Chowdhry.

Through the cycle returns

Both DSC Meridian strategies have an all-weather performance objective of targeting double-digit net returns through a full cycle, though they target higher returns during the recovery after periods of corporate distress, and then position the funds more defensively when risk premiums are lower. The firm has so far met its objectives since its 2018 launch and made profits in very different years, due to their nimble portfolio construction. "At the top of the cycle, when spreads are tight and defaults are low, we prioritize capital preservation, liquidity, secured instruments and alpha shorts. At the bottom of the cycle, when spreads are wide, we target capital appreciation and focus on long opportunities in stressed and distressed securities. Beginning 2020, credit markets had been in one of the longest benign cycles ever, so we were defensively positioned, running a low net exposure. By March, our shorts kicked-in and we protected capital, which allowed us to pivot the portfolio and focus on very attractive long opportunities caused by the Covid pandemic," says Chowdhry.

Some key distressed trades in 2021 involved debt of two Latin American airlines, acquired at prices in the $30s, which more than tripled to reach near or above par value ($100), and outperformed similar debt in developed markets. In one case, DSC Meridian was an active participant in the corporate restructuring serving on the creditor committee and driving the process. In the other case, DSC Meridian was a passive participant demonstrating the firm's flexible approach to investing in distressed.

Triple digit returns were also made from some selective excursions into equities after the Covid shock. Chowdhry has always analysed the entire capital structure in search of the best risk/reward, and this sometimes comes from the equity. During the Covid crisis, a regional and school coach transport operator in Europe had bonds trading at 90 cents and yielding 4%, while its equity had dropped by 80%, offering a more asymmetric proposition. "We mainly look at equities through a credit lens and have the flexibility to invest across the capital structure to capture the best expression of the asymmetric risk/reward," says Chowdhry.

The high yield ESG learning curve

ESG is currently seen as cyclically fashionable, but many investors and companies have had multi-decade long ESG objectives. In 2021, Investcorp-Tages seeded DSC Meridian's second fund, a highly innovative ESG credit strategy, the Climate Action Fund. "We partnered with Investcorp-Tages because they have a strong reputation for seeding and ESG, including an A+ UNPRI rating," says Chowdhry.

The climate action strategy shares the performance objective of the flagship strategy and has had similar returns. Neither strategy targets the mainly investment grade, 'green bonds' and 'sustainability bonds' that can exhibit a 'greemium' valuation premium but offers relatively low yields of 4-5%. Instead, DSC Meridian's strategies are focused on US high yield credits currently offering around a 10% return target. Returns apart, the philosophy of the strategy does not restrict it to exclusively 'green' companies or projects. Part of the portfolio is aligned with net zero or other climate objectives, but the most exciting aspect is improving climate (and investment) performance of heavy emitters – and DSC Meridian has already had considerable success engaging with high yield issuers to proactively shape positive carbon outcomes.

US high yield is a huge and often neglected climate and carbon engagement opportunity due to its disproportionately high carbon footprint and slow adoption of climate disclosures and decarbonization targets. "While US high yield issuers make up only 3% of the credit investment universe in the US, they contribute approximately 33% of carbon emissions. The key industries include energy, construction, power, steel, transport, airlines and cruise lines," says Chowdhry. The arithmetic here is that US high yield issuers account for $1.5 trillion of debt outstanding and emitted 2 billion metric tons of absolute, annual scope 1 and 2 carbon emissions, as of February 2021 (as highlighted in DSC Meridian's April 2021 ESG Spotlight White Paper, "*Event-Driven Credit: Climate Impact Through Corporate Engagement*").

Additionally, these companies are at an earlier stage of their ESG journey than many large global companies: as of February 2021, just 15% of the 962 issuers in the MSCI US High Yield Index were disclosing scope 1 and 2 carbon emissions; fewer (14%) had set science based targets consistent with a 1.5 or 2 degree warming scenario and fewer still (11%) were currently aligned with such a scenario, (as flagged up in DSC Meridian's May 2021 ESG Spotlight White Paper, "*Crawl, Walk, Run: Fit-For-Purpose Solutions to Address Climate Change*").

Collaborative engagement

This last white paper also sets out how different companies traverse their climate journeys and trajectories at different speeds. The "crawl" stage commits to a materiality assessment that will typically identify 5 to 10 ESG issues as being material. The "walk" stage involves consistent disclosures across regulatory filings, annual reports and sustainability reports. The "run" stage requires a commitment to net zero, which could include divesting higher carbon units and investing in decarbonisation, setting credible interim carbon targets, board engagement and financial incentives for senior management and other staff. DSC Meridian is also flexible about which reporting and disclosure frameworks such as CDP, SASB, TCFD or GRI are most attuned to different issuers' plans.

ESG disclosure and improvement

The engagement book has so far achieved the highest return on capital: since the Climate Action Fund's April 2021 inception, the engagement book has generally comprised about one third of the fund's long exposure but has contributed over 50% of returns as some issuers announced ESG changes that were welcomed by investors. This corresponds with some equity research suggesting that 'ESG improvers', rather than firms already boasting the highest ESG scores, are the biggest alpha opportunity. So far, as of March 2022, the engagement book comprised 12 issuers out of 50 or 60 issuers the Climate Action Fund has invested in. DSC Meridian speaks with most of the companies in the portfolio about ESG and fundamental issues but classifies issuers as 'engagements' where there are specific climate outcomes identified and acted upon.

Some asset managers outsource engagement to one or more of proxy voting advisors, ESG ratings agencies, and others but DSC Meridian prizes one on one dialogue. "We work with companies on a collaborative and constructive basis. Activism is not only for equity investors. Real time engagement, directly with the company, is better than third party reports based on web scraping and annual reports, which can be over a year out of date. More and more investors are asking issuers for ESG data, which DSC Meridian believes is essential for assessing high yield issuers. We understand companies better and know where they are heading. We engage with companies on a wide variety of Key Performance Indicators (KPIs)," says Chowdhry.

Engagement asks for both disclosure and action. "A short-term priority is simply asking companies to disclose scope 1 and 2 emissions and asking some firms to split their "dirty" activities from their "clean" activities through spin offs," says Paula Luff, Director of ESG Research and Engagement. At some stage in the future, DSC Meridian might focus attention on scope 3 emissions, which are even more rarely disclosed. DSC Meridian is also educating firms about the rising price of carbon, which they expect could increase much further.

High yield companies could even be more receptive to ESG discussions, simply because they need to refinance every few years. Many companies appreciate the ESG input from DSC Meridian. Some high yield issuers are under-resourced in terms of having no dedicated Chief Sustainability Officer (CSO) and an average of only half of one full-time employee devoted to ESG, according to DSC Meridian research. A cruise line operator and a sand materials company have already provided written, positive feedback endorsing DSC Meridian for its ESG input. Most of the engagement is environmental, but there have also been discussions about health and safety issues, an example of a social topic.

Engagement has been mainly bilateral so far, simply because DSC Meridian are not aware of any other investors pursuing the same approach. "When we started our ESG journey 3 years ago, nobody else was doing it, so we could not borrow any ideas on engagement," says Jay Blount, Director of Business Development. The firm is however open-minded about collaborating with other investors who share similar objectives. The aforementioned thought leadership white papers, and others on the DSC Meridian website, educate investors and the industry about DSC Meridian's approach.

Alignment, credits and offsets

Some companies, including those using older or legacy technologies, need carbon credits and offsets to meet their net zero targets, which can be controversial where these measures are seen as substitutes for changing the core business. DSC Meridian views credits and offsets as interim steps along a decarbonization continuum. "If companies such as airlines or cruise lines cannot eliminate carbon from their core activity, based on current technology, then buying credits is better than nothing. Some US airlines are doing as much as they reasonably can now, including upgrading their fleet and investing in new climate mitigation technologies. This sets a good example for other airlines in Latin America or elsewhere," says Chowdhry.

Legacy technologies not excluded

Since DSC Meridian is targeting large polluters for engagement, it would be irrational to avoid investing in them. "It is not an exclusionary strategy," stresses Chowdhry. DSC Meridian will engage with both forward-looking companies and those in legacy technologies. No industries are necessarily off limits. Excluding or divesting from a high-emitting industry or issuer may make for a lower carbon portfolio, but it has no impact on real world emissions in DSC Meridian's view. The manager prefers collaborative engagement to exclusions and is pragmatic about the limits of current technology. "Coking or metallurgical coal has no current substitute in the steel industry. We applaud new technology using hydrogen to make steel, but it is not yet being deployed at scale," says Chowdhry.

Shorts combine financial and ESG criteria

Shorts can be based on financial or ESG risks or a combination of both. A highly successful short in a specialty finance lender was based on discrepancies in its disclosures, though its focus on high interest payday loans was also somewhat controversial since some investors perceive this as "predatory" or "usurious" lending. This specialty finance lender ultimately filed for bankruptcy in Q1-2022.

Outlook

DSC Meridian's base case is that low double-digit net returns could be achievable from a mid-cycle expansion of risk premiums. Chowdhry admits that it is tricky to judge the exact point of the credit cycle since a typical cycle lasts 5-8 years but the current one was interrupted by Covid: "Two years post-Covid it is reasonable to assume we are mid-cycle, and there are good opportunities because all asset classes have corrected: equities, investment grade credit and high yield have all had pullbacks and there is plenty of dispersion and volatility".

The biggest two risks Chowdhry sees would be an escalation of the Russia/Ukraine war to include NATO, and higher inflation, with the second one feeding into investible themes: "Current inflation of 7-10% is already starting to impact consumer sentiment, though high yield has been fairly insulated. High yield spreads have risen by 300 bps, but we are not yet seeing a rise in defaults. We are cognizant of supply chain and inflation risks and avoid both on the long side. We also own materials, mining and commodity companies that may benefit from inflation".

Interest rate risk is a lesser concern. "Bonds yielding 10% with a 3.5-year duration do not have much interest rate sensitivity and are more sensitive to equity valuations. We are hedging interest rate risk and in theory could even over-hedge it, but we would rather take a bottom-up approach and pick alpha shorts than take macro views," says Chowdhry. The portfolio currently has positive overall carry of 6%, including the negative carry from the short book. "The shorts are designed to offer an asymmetric risk reward. Trading near or above par, they have little or no risk if bonds are retired or called at par, but do have significant optionality on the downside," he adds.

Both strategies offer discounted fees in their founders' share classes until those share classes reach $500 million in assets under management.

Founder
FinYX and Algoz
Ra'anana, Israel

Yariv Eisenberg

FinTech platform for systematic equity and crypto strategies

Starting programming at the age of 13, Yariv Eisenberg always dreamed of opening a tech company engaged in the capital markets. After serving in the IDF (Israeli Defence Force) elite intelligence unit, 8200, and completing his studies in maths, engineering and bioinformatics, he launched Fingenom (now renamed FinYX) in 2011 and the crypto unit, Algoz, in 2017.

The first five years at FinYX were focused on developing algorithms in the high frequency trading space, before developing algorithms to manage external capital for medium frequency strategies. Eisenberg, who is now CTO, maintains a hands-on oversight, working closely with a team of 25 developers and researchers, and has a deep knowledge of the algorithms: "I personally wrote the code for the first two strategies and then taught the DNA to the team. This cannot be learned from a textbook, we invented it ourselves and do things differently. I did not code the crypto strategies but was closely involved in the design of every detail."

The FinYX platform has already spawned five strategies in ten years: two high frequency, two medium frequency and one low frequency, but all are based on common principles forming a gauntlet that future strategies must also pass.

The strategy gauntlet

"Overfitting is the cardinal sin in our line of work; hence, we put our strategy through rigorous overfitting tests. After controlling for overfitting biases, the strategy must have a Z-Score, which is similar to a Sharpe Ratio above 3. Other than performance, there are other parameters we assess. The basic financial pattern that the strategy is based on needs to be explainable and understandable. Without this, the strategy is hard to improve. The strategy needs to be generically applicable across multiple markets and products; if it only works in some, we will reject it. Last of all, the strategy needs to be scalable up to reasonable capacity," explains Eisenberg.

Practical and innovative researchers

Strategies are developed by people, and our growing team should satisfy special criteria: "Firstly, they might have studied to an advanced theoretical level, but they do not need a PhD. It is not just about degrees or IQ. We also look at EQ. We believe people with an optimistic attitude get better results. In a culture where anyone can say anything to anyone, they should be confident enough to hear hard criticism. They need to be down to earth and practical. Second of all, they need to think outside the box. Nobody teaches us how to run our strategies in many new areas. Thirdly, people need to be efficient in every manner, from meetings to automated processes and in the way they build the code. Last of all, being responsible for other people's money, they need integrity in the right place," says Eisenberg.

MFT equity indices

The MFT futures equity indices strategy, Lumos Fund SPC – 4Cast received *The Hedge Fund Journal's* CTA Performance Award 2022 in the Medium Frequency Trader – Equity Indices category. It has realized a stupendous Sharpe around 3 since going live in 2019, which was very close to its simulated performance between 2015 and 2019. It started with Nasdaq futures before adding other products from the US and Asia, which have also worked well. "The realized execution slippage has also been lower than the backtest," confirms Roey Kosover, Lumos Fund's manager.

The opportunistic intraday model uses technical price data across asset classes. "The model does not predict price as such, but rather predicts whether or not there is intraday momentum by using lots of inputs from other asset classes. It is a rule-based statistical algorithm and has a limited number of parameters used as inputs for the trading signal. We understand why the model works, and why it works in different markets," says Kosover.

Its hit rate is nowhere near the 99% that might be sought after from HFT but is above 50%. It is the win/loss ratio that generates the exceptional returns, by cutting losers and running winners. The average daily gain is about 1.5 times the average daily loss.

MFT scalability

The mid frequency strategies focus on trading time frames between hours and days and are more scalable than the HFT market. For instance, stress and sensitivity tests suggest that the MFT futures equity index strategy could run $400-450 million, before leverage. "It will however be soft closed before that level to allow for organic growth from performance. Meanwhile, research is underway about entering into new markets that may expand capacity. We think it could also be profitable for other asset classes such as commodities," says Kosover. Meanwhile, the crypto strategies, which are not leveraged, can manage $1-3 billion.

HFT and MFT synergies

"A HFT infrastructure and proprietary technology (which was never part of the Ultra HFT arms race) is not normally necessary for our current speed of execution. However, HFT market data vendors and servers in the US and Asia create the potential to execute very fast, which might be useful for risk management. Moreover, the library of millisecond tick data is helpful for rapidly processing robust simulations based on 11 years of data. Our live performance matches our simulations with a 90-95% accuracy, which is testament to our proprietary testing environment. The objective is to have robust and repeatable performance," says Kosover.

Covid drawdown and potential recalibration

Risk management rules can sometimes have unintended effects. The strategy's largest drawdown occurred during the Covid crisis in April 2020, which saw extreme volatility in the markets. "On the one hand, closing March with -4.2% and April with 11.7% net return is something that we are satisfied with. However, during March-April, we faced the maximum drawdown of 18.8% net," says Kosover. This was mainly a function of our mechanical risk management stop losses being repeatedly hit, though some discretion was also exercised to reduce volatility. There were a few days in March 2020 where the program did not trade at all because we judged that the volatility levels were in uncharted territory. With the benefit of hindsight, performance could have been better without the risk management: "We ran a simulation of March without stop losses. The strategy would have gained over 25%, instead of losing 4.2%; however, running without stop losses would have also resulted in a drastically larger drawdown. As important as it is to maximise returns, it is just as, if not more, important to minimize risks, especially when working with external capital. Given another chance, we would still run the strategy with our risk management models and stop-loss mechanism in place," says Kosover.

The core algorithm has had minimal change since going live in April 2019. Following the Covid market volatility, the firm will soon implement a dynamic stop loss mechanism, which will use wider stop losses and lower leverage in higher volatility regimes.

Crypto strategies

Whereas the MFT futures equity index strategy could be (up to) 5 times leveraged long or short, the long/short cryptocurrency strategy (dubbed multi-strategy) uses no leverage at all and keeps exposure in a range between 35% short and up to 75% long. The market neutral strategy maintains net exposure around zero and avoids using any leverage.

The multi-strategy has realized a live Sharpe above 2.5 in line with its backtest, and the market neutral has generated a Sharpe of 1.25. Both are highly ranked by databases.

During the crypto rout seen in May, which continued into June, market neutral made 2.9% and multi-strategy made 4.1%, net of fees. "Our models have seen these pullbacks before, 4 and 8 years ago. The headlines today are different, but the market behaviour is still the same," says Shivani Mehta, Business Development Associate.

Since inception, the crypto multi-strategy has shown a moderately positive correlation to Bitcoin and Ethereum as it started out by trading only those two currencies and was somewhat long biased given the bull market. Today, it trades over 20 assets, while the market neutral strategy trades 15 assets (as of June). Both strategies' aims are all weather returns: "The multi strategy is a directional strategy, long or short, even though we are personally quite constructive on the long-term outlook of crypto. The fund aims to deliver uncorrelated absolute returns, regardless of market direction. We recognize that in rangebound markets with no momentum, the strategy may get chopped around," says Alon Karniel, Algoz fund manager.

Unlike crypto arbitrage strategies, the market neutral strategy is not trading arbitrages between venues, or between cash and futures markets. It is instead expressing relative value views on cryptocurrencies, based mainly on correlation analysis between various pairs of cryptocurrencies, which may be traded versus Bitcoin or Ethereum as a numeraire.

The genesis of the crypto strategies was Eisenberg's personal interest in crypto and desire to do something different: "I realized that not many companies had the opportunity to become a market leader in this space. The ambition, when entering crypto, was to do things that people never did before, with unique algorithms, in contrast to other funds that are very correlated to BTC and therefore also between themselves. Accurate data collection is another challenge in crypto, which is very different from financial markets".

Trading and execution

The crypto strategies' trading timeframe of one to three days is also longer than some arbitrage strategies, and the equity strategy, and helps to increase strategy capacity: "Though on a like for like basis, cryptocurrencies have more slippage than equity indices, the longer timeframe for signals and execution means that slippage is a marginal factor. The crypto strategy trades 24/7 and may take hours to execute," says Karniel. Assets in the crypto strategies are currently managing tens of $ millions and capacity is estimated at $1-3 billion, given that the crypto market is worth $1.3 trillion as of June 2022, even after the recent rout.

Signals

Whereas the futures equity index MFT strategy draws insights from other asset classes, the crypto strategies are currently based only on historical cryptocurrency price data, though this may broaden out: "The crypto programs may, in the future, enrich their signals with other data sources, including sentiment, social media and on-chain data, which reveals all occurred transactions on the certain blockchain network," says Karniel.

Venues and counterparties

Having started trading only spot markets, and shorting through margin, Algoz's strategies have migrated onto futures. Algoz have a broad understanding of crypto markets, having been market makers between 2017 and 2021. They still maintain connectivity to 15 venues, including 9 of the largest 11 exchanges by market capitalization. Currently they trade on only three exchanges (Kraken, Binance and FTX) but could instantly re-activate other lines if necessary.

Exchanges are selected on a range of criteria, including size, liquidity, and quality of execution. "We know that Binance can be controversial, but we rank it as number one in liquidity; moreover, clients were reimbursed in the past for cyber events. In contrast, Coinbase might superficially seem to be a safer choice, but its fees would eat into returns," says Karniel.

Service providers for crypto funds

For the crypto funds, AK Jensen (AKJ) is providing the legal infrastructure. "As a leading hedge fund platform, AKJ provides all components necessary for the set up and day-to-day operation of a regulated, tier-one hedge fund trading digital assets," says Karniel.

Margin in the crypto funds operated on the AKJ platform sits with exchanges. In its new crypto fund, about to launch this September, prime broker Hidden Road will handle margin. The new fund will include a sleeve for US investors: a Cayman mini-master with a feeder that can accommodate both exempt and taxable US investors. The structure can also accept subscriptions in kind, in cryptocurrencies, as well as in cash. Legal counsel is Seward & Kissel in New York, and Mourant Ozannes in Cayman. Investors will include family offices, funds of funds and high net worth individuals, mainly in the US.

Crypto and DeFi outlook

"There will be a battle between centralized and decentralized finance, and we expect that the crypto market will benefit from smart centralized regulation. We are long term believers in the crypto markets, and we expect that crypto will be the next big innovation in finance. We are not likely to launch a long only strategy, because our expertise is in absolute return," concludes Eisenberg.

David "Dusty" Granet

Founder and CIO
Green Trading Capital
New York

Dusty Granet founded Green Trading Capital in 2019 to invest in select environmental markets, including regulated carbon, renewable energy credits and carbon offsets. The investment process focuses on evolving regulations as well as supply/demand imbalances to trade a range of long-term and short-term themes. Energy transition, developing regulations, corporate net zero policies, and new infrastructure and technology, are key to the investable space. Carbon and renewable energy markets continuously evolve with new markets launching as the implications of climate change continue to disrupt society. The flagship fund is a diversified multi-thematic vehicle trading across a range of environmental markets and investment strategies. In addition, the firm manages thematic strategies focused on specific markets such as California carbon allowances or renewable energy credits. The investment strategies provide environmental and social (ESG) benefits, supporting clean technology adaption, transition to renewable energy and job creation. Before launching GTC, Granet was co-desk head of US carbon and renewable energy markets at BGC Markets, a unit of Cantor Fitzgerald. Before BGC, he was on the California emissions desk at Evolution Markets. His career started as a bond analyst at AIG Investments, where he was involved in projects to hedge European carbon exposure. He has a degree in Accounting and Finance from Lehigh University in Bethlehem, Pennsylvania.

Jim Hayes

Managing Partner and CIO
Lucerna Global Capital
Boston

Jim Hayes founded Lucerna Global Capital in 2021 to manage a long/short emerging market equity strategy, which aims to capitalize on deep sector-specific expertise and wide dispersion within and between countries and sectors. The strategy is primarily focused on the financial services, real estate, energy, utilities, communications services and consumer sectors, where Hayes and the Lucerna global team have decades of experience. Longs need strong business models, attractive valuations and catalysts for re-rating. Short theses could include weak business models, deteriorating fundamentals and earnings, excessive leverage, regulatory threats and aggressive accounting. The strategy has been treading cautiously in the first five months of 2022 with a focus on capital preservation, and with net exposure towards the lower end of the target range. Hayes was previously a long only emerging market portfolio manager at Fidelity on team-managed funds which generated top sextile performance during the period of his tenure. His prior long/short equity investing experience was at "Tiger cubs", Hunter Global Investors and Bowman Capital Management. He has also lived and worked in several emerging markets, as an investment banker for Morgan Stanley and strategy consultant for Bain & Company and speaks six languages. He has an MBA from Wharton and graduated from Amherst College.

Alastair Hollingdale/ Professor Michael Hobson

CIO and CRO/Chief Scientist
Cambridge Machines
Cambridge, London and Singapore

Cambridge Machines was founded in 2017. The firm uses proprietary infrastructure for data warehousing, processing, coding and backtesting, and proprietary machine learning techniques, within a Bayesian statistical framework, to extract signals from noisy data. A team of 16 including computer scientists and scientific researchers have developed techniques and algorithms tailored to tasks such as optimising trading speeds, risk management, trade netting, order routing, and execution. Investment strategies include intraday mean reversion, directional and market neutral approaches, and can be combined in flagship and customised multi-strategy programmes. The strategies are not high frequency, but they make use of high frequency tick data. The realised Sharpe ratio of above 1 in two years of live trading is close to the backtest, and there has been low correlation to equities, broad hedge fund and systematic hedge fund indices. The strategies trade futures and single stocks, where the investment universe is being expanded from US equities to UK, European and Japanese equities. Assets are more than $50 million and a Cayman structure is being launched. Michael Hobson is an expert in Bayesian statistics and astrophysics who has published over 400 papers, and previously headed data analysis at the Cambridge University Cavendish Astrophysics Group. Alastair Hollingdale was formerly a partner and senior trader at Brevan Howard, earlier Head of European Rates Trading at Bank of America, and at RBC, and previously Head of European Swaps Trading at Morgan Stanley and UBS. Hobson has a PhD in the physics of star formation, and a BA in Natural Sciences from Cambridge University. Hollingdale has an MSc in Data Science from Birkbeck University and a BSc in Economics and Maths from Bristol University.

Elon Huang

Founder and Chairman
MainNet Capital
Singapore

Elon Huang started MainNet Capital in 2017 to leverage ABCD (artificial intelligence, blockchain, cloud computing, big data) technologies, offering wealth management, asset management and a platform for a range of strategies. They include MountView Multi Strategy Fund, a volatility risk premium (VRP) strategy (wrapped in a Singapore VCC fund), which sells options and uses a sophisticated hedging algorithm and customized risk management process to hedge 'Greeks' such as Delta, Gamma, and Vega. The strategy has generated strong risk adjusted returns with low equity market correlation. Additionally, MainNet and Pythagoras Management co-manage a cryptocurrency trend following strategy, which has captured more upside and less downside than a long only buy and hold approach. It currently trades CME Bitcoin futures and will be adding the BTC Mini and ETH contracts. Huang also created the M Turing VCC, for a crypto mining strategy, that is one of the first fully compliant VCC Bitcoin funds in Singapore. Huang previously worked in banking for almost a decade. He has a BA in Electrical Engineering from Technical University of Munich and has studied Bitcoin and cryptocurrency technology at Princeton University, and blockchain technologies and business management at MIT Sloan School of Management.

Jae-Min Hyun

Founder and CIO
NWOne
New York

Jae-Min Hyun founded NWOne in October 2017 and the NWOne Diversified Strategy Program has generated a Sharpe ratio well above 1 from its quantitative fundamental strategies in commodity futures since inception, whilst maintaining a low correlation to the benchmarks. By using rigorous statistical models augmented with deep fundamental insight into the individual commodity markets, NWOne aims to capture alpha from commodity markets in a predictable and a repeatable manner using systematic trading frameworks. The inputs for NWOne's proprietary models include physical commodity supply and demand data, physical commodity prices, risk premiums arising from consumer and producer hedging activity, and market impact dynamics from investor flows. NWOne also engages with external consultants to maintain the domain expertise within each commodity market. NWOne's strategies take long and short positions in directional futures, calendar spreads, and inter-commodity spreads, over multiple frequencies ranging from 30 minutes to 8 weeks across energy, grains, meats, softs, precious and base metal sectors. Prior to NWOne, Hyun was a portfolio manager at Tudor Investment Corp's seeding platform (Launchpad trading), and a portfolio manager at Ellington Management Group. He started his career at Morgan Stanley as an options trader managing commodity, equity, FX, interest-rate portfolios. Hyun holds a MSci, MA and BA in Physics from Cambridge University, and an MBA from Collège des Ingénieurs. He is a CFA and CMT charterholder.

Samuel D. Isaly

Managing Partner
Exome Asset Management LLC
New York

Samuel Isaly founded Exome in 2018, personally investing $100 million. Another $95 million has been raised and a further $150 million capacity remains. The firm offers global and emerging markets healthcare long/short equity strategies, investing across pharmaceuticals, biotechnology, diagnostics, medical devices, healthcare services, and next-generation sequencing. The portfolios are focused on around 100 stocks drawn from a universe of 2,000. The dedicated emerging markets strategy taps into double-digit annual healthcare spending growth in many emerging countries such as China, Indonesia, Vietnam, South Korea, Brazil and South Africa. Exome's research whitepapers have explored themes including *Applications of NGS or DNA Sequencing*, *How to Profit from COVID Solutions*, and *Growing Innovation in the China Biotech Industry*, where Exome invested in a then-private Chinese cancer screening firm, New Horizon Health. Exome has also invested in some other private equity biotech and other private healthcare opportunities, including Impact Therapeutics, which is developing highly selective so-called "parp inhibitors" and synthetic lethality cancer treatments, and Broncus Holding Corporation, a lung treatment medical device developer, which floated on the Hong Kong Stock Exchange. Isaly previously founded OrbiMed Advisors LLC in 1998, serving as Managing Partner, where he managed the Worldwide Healthcare Trust for over 20 years. He was earlier a pharmaceuticals analyst with Chase Manhattan Bank, Merrill Lynch, Legg Mason and SG Warburg & Co. He has an MSc in Economics and Econometrics from the London School of Economics and an AB in Economics from Princeton University.

Omkar Joshi

Founder
Opal Capital Management
Sydney

Omkar Joshi founded Opal to trade an Australian equity market neutral strategy. He judges that the long term, buy and hold focus of most investors in Australia's equity market gives rise to inefficiencies that shorter term, catalyst-driven investors can exploit to generate uncorrelated returns. Since inception, the Opal Market Neutral Fund has generated a Sharpe ratio above 2 and annualised net returns of over 17%, with short alpha roughly three times greater than long alpha. Opal has won numerous awards and the strategy is broadly market neutral but has some latitude to take small amounts of net long or net short exposure; it has demonstrated a slightly negative beta since inception. It is not sector neutral and there is no structural bias to style factors. Inputs include fundamental, technical and quantitative elements, and company management teams are interviewed regularly. Broker research and expert networks are used in addition to in-house research. The Sharpe above 2 is consistent with Joshi's longer term track record since 2013 at other firms. He was previously a portfolio manager at Point72 Asset Management and at Regal Funds Management and earlier a partner and sector head at Watermark Funds Management. His career started at KPMG and in equity research at Credit Suisse. He has a BComm from the University of New South Wales and Wharton School (UPenn). He is both a CFA and CMT charterholder.

Cem Karsan

Founder, CIO and Managing Principal
Kai Volatility Advisers
Chicago

Cem Karsan founded his own firm Aegea in 2010, which later became Kai Volatility Advisors, to pursue distinctive volatility strategies. The long volatility strategy aims to provide tail protection, negative beta, and generate structural alpha, through being long of volatility, convexity and skew in US equity markets. The costs of the protection are mitigated through seeking to take advantage of flow-driven mispricing in options by monitoring dealer positioning. The dealer flow strategy, which aims for zero equity beta, uses dealer positioning data to predict implied volatility surfaces and expected distributions of outcomes, which might arise from dealers dynamically hedging their exposures. Karsan previously founded a proprietary market maker, Precision Capital Management, which focused on equity index arbitrage. Earlier he worked in derivatives arbitrage at Bear Wagner Specialists, and previously was a derivatives arbitrage trader at RBC Dominion Securities. He has an MBA from Northwestern University's Kellogg School and a BA in Mathematical Economic Analysis, Policy Studies and English from Rice University.

Orkun Kilic

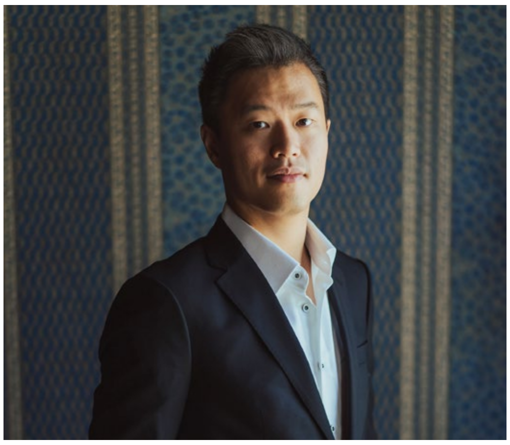
Founder and CIO
Berry Street Capital Management LLC
London

Orkun Kilic founded Berry Street Capital in 2019. Prior to establishing Berry Street, Kilic was Head of European Investments at Paulson & Co, where the same strategy generated remarkably strong risk adjusted returns. Berry Street runs an event-driven equity strategy, focusing on hard catalyst situations (announced deals, offers) as well as special situations (events, holding company discounts, share class arbitrage, mean reversion) where there is a near term catalyst expected. Berry Street has a global mandate with a bias towards Western Europe and the UK and aims to deliver strong risk-adjusted returns with limited equity market exposure. Risk management has sub-strategy and position size limits and utilises option structures to mitigate potential downside. On top of this there are market, sector and volatility hedges which help protect the portfolio during periods of market stress. Despite the challenging environment, launching just before the Covid-19 pandemic, the firm has seen good interest from investors and by 2022 assets under management had grown to more than $800m. Prior to Paulson, Kilic worked in M&A at Morgan Stanley and in private equity at Fiba Capital in Turkey. He has an MBA from Harvard Business School, an MSc in Financial Engineering from Bogazici University and a BA in Business Administration and Economics from Koc University, both in Istanbul.

Sean Ho, Founder and CIO and
Edmund Ang, Founder and COO
Triata Capital
Hong Kong/Shenzhen, China

Sean Ho + Edmund Ang

A disruptive deep fundamental investor triangulating data


Sean Ho


Edmund Ang

A huge and growing family tree of "Tiger cubs", grand cubs and grand grand cubs, who trace their lineage to Tiger Management founder Julian Robertson, share a long-term approach to deep fundamental research. They focus on high growth, misunderstood value and are not afraid to be long-term holders amid short term challenges and volatility.

Alternative data DNA

Triata's key differentiator from the other Tiger funds is its alternative data DNA. Co-founder and CIO Sean Ho was previously at Tiger grand cub Tybourne, a fund spun out of Tiger cub Lone Pine, where he set up their alternative data team, and his clear vision when he launched Triata – an acronym of "triangulating data" – was for data to be the core DNA in the fundamental research process. "The vision of Triata is to be a disruptor in fundamental investing, taking advantage of the huge and growing volume of alternative data available in China. Data volumes are growing at an exponential rate as more and more data fields are becoming digitalized. We can capture these alternative data and leverage more automation to better understand the fundamentals of our target companies. A large part of our research information set is related to alternative data," says Ho.

The investment process follows a traditional, deep fundamental approach based on the Tiger philosophy. Beyond the traditional information sources of reviewing public filings, meeting management, making site visits, and interviewing expert networks, Triata's information set is a lot larger as it uses alternative and big data to corroborate, prove or disprove its investment theses. This especially exploits the huge digital footprint of businesses in China, which has very high penetration of smartphones and e-commerce.

"Beyond common apps engagement and GMV data, we look closely at very targeted data specific to each company and sector and relevant to our investment theses at that point of time," says Ho. "We think this is a lot more powerful than expert networks for channel checking. For instance, for the jewelry sector we can analyze the competitive landscape of various brands by tracking data such as number of stores by tier cities, social heatness on live streaming platforms, online sales, consumer reviews, etc. In the auto industry, historically you would channel check through 4S auto dealership stores. Now in China's growing electric vehicle market including local manufacturers such as Nio and Xpeng, as well as Tesla, which are selling direct-to-consumer (D2C), there's a lot of digital information that can be tracked automatically such as orders for different models, car delivery time, consumer's sensitivity to price change due to inflation or supply chain issues, etc.," says Ho.

The Triata process is also partly informed by Ho's time at Susquehanna, which taught him about probability and game theory. "We use big data to probabilistically test investment theses, not in a binary way. In an imperfect information environment, we maximise our probabilistic expected value like a poker player. We review our right and wrong decisions, and upgrade target prices and conviction levels to the most relevant data, using real time data feedback loops, which could include China policies," he explains.

Deep fundamental mindset

Despite the firm's strong alternative data DNA, Ho explains that, "It is important to make the distinction here that we are not a quant fund looking to collect a massive amount of data to generate buy or sell signals from a black box model. Ultimately, our investment philosophy is based on a deep fundamental mindset with the goal of buying great businesses at reasonable valuations and shorting companies that we believe are overvalued." This is helped by Ho's past 14 years of experience in fundamental investing.

Integration

Triata has integrated alternative data from day one, in terms of investment process, proprietary data platform and people. The data and analyst teams are highly integrated, use collaboration tools, and both teams' incentives are tied to their portfolio P&L contribution.

This might be difficult to implement in some other traditional fundamental funds if their founders do not have the right blend of fundamental and quantitative background or if there is a large resistance to change internally. Other managers may struggle to holistically handle data for several reasons: "The data side can sometimes be more of a support function that creates conflict and does not tie in well with P&L generation. It needs to be systematically structured and be an integral part of the investment process. Some firms also do not have the right composition of talent and rely mostly on third party subscriptions. Hence, talent gatekeeping is key for us. For our data engineers, we hire top technology talent with experiences from big tech companies such as Google, Yahoo, Alibaba; our analysts are from top MBA schools with strong buyside experiences and they have quantitative backgrounds to be able to work with large datasets," says Edmund Ang.

"The outcome of this setup is a fully integrated investment process incorporating deep fundamental research and systematic use of alternative data and a robust risk management framework to ensure our idea generation and capture are repeatable and effective," says Ho

Synergistic skillsets
The importance of synergistic team skills is also seen in the two co-founders. Says Ang: "Sean and I have known each other for a long time now since our student days at Columbia University. We both studied masters in mathematics of finance but developed different career paths and have complementary skillsets. My previous experiences included risk management as a derivatives trader at a buyside firm and setting up a new office and executing the turnaround strategy for another financial firm. Sean came to me with a very clear vision of wanting to build a fundamental hedge fund with alternative data as its core DNA and he wanted me to help build the business, culture, people and processes while he focuses all his effort on the investment side of the business". "Edmund has a strong international and financial background and real-world experiences in building an organization that is well suited for the COO role," says Ho.

Building a team of complementary and diverse tech and analyst talent
"We lifted an entire FinTech start up team of four people and relocated them to Shenzhen, China's Silicon Valley, because we think that their skillsets are a perfect match for Triata's vision," says Ho. The China office, where the analyst and data teams are based, provides on the ground research though the firm is regulated in Hong Kong and has offshore investors.

Team hires boast a variety of tech talents and analysts with in-depth sector experiences. "The objective is to hire people with a diverse range of expertise, including big data, AI, machine learning and natural language processing (NLP). New hires need to be complementary and additive to the existing team skillsets," says Ho. Triata reviewed about 200 CVs for each role and typically interviewed 10-20 people. "The process involved multiple interviews with many team members, with some research/programming projects, monitoring reactions to challenges in case studies, and testing spontaneous responses to market conditions. Personalities and cultural fit were analysed informally by asking questions from multiple angles," says Ang.

There is also diversity in the team: "We welcome top talents with different background and experiences, and harness diverse thinking through our collaborative, transparent culture," says Ang.

Transparent corporate culture
Triata's corporate culture champions transparency, meritocracy and collaboration. Staff are incentivized through performance-driven upside participation. "We have a very flat structure, and we believe in decentralized thinking and idea generation," says Ho. Recruits need to be comfortable with something called 'constructive conflict'. "The team will challenge each other, and they should not take it personally. They should be creative and open to critical feedback. We offer a safe environment to express true and different thinking. Our hires appreciate having more transparency and influence than they had at their previous firms," says Ang.

Real time proprietary data research platform – TriataAlpha
TriataAlpha is the firm's in-house proprietary AI platform developed internally to supercharge research workflows and link alternative data with fundamental intelligence. The platform includes the latest news and public opinions on regulatory policy and ESG etc. combined with sentiment analysis to help flag information that could affect the fundamentals of target companies. It also has in-depth internal notes on earnings beats or misses as well as consensus and proprietary forecasts on key business drivers. Alternative data tracking categories include apps engagement, e-commerce sales, offline stores, advertising, gaming, jobs and video streaming, etc. which supports related fundamental investment theses.

Triata practices agile software development commonly applied in tech companies and some of its latest initiatives include speaker recognition and tone analysis to analyze earnings calls, management quality scoring and policy tracking. Multilingual speech understanding and text classification are used, based on state-of-the-art speech and NLP technology.

AI and analysts: a symbiotic relationship
"We use AI expertise to help identify fraud risk factors, but we still need a human to analyse it. Long run, AI is becoming better trained and better at identifying information. The TriataAlpha platform acts like a GPS for our analysts, helping them to extract and focus on the right information. Triata is a data-driven, tech savvy hedge fund with a substantially automated big data process. Our technology is designed to save time, uncover new insights and boost transparency," says Ho.

Alpha and beta return targets
Prior to launching Triata, Ho spent 19 months running friends and family money in a strategy with similar risk parameters, but with more position concentration, which annualized at 70% CAGR. Triata's target return on capital is not that aggressive but is still very high at 25% CAGR for both long and short books, including a mix of beta and alpha, though Ho expects that alpha should drive the majority of returns. The strategy invests throughout Greater China equities and Ho sees a lot of alpha potential in China 'A' shares on the long and short sides. "The market is more uncorrelated and driven by retail investors, which make up 80% of flows and can cause deviations from fair value beyond fundamentals," says Ho.

Triata China Equity Master Fund has generated an estimated June 2022 YTD performance of +19.6% and outperformed MSCI China Index (YTD -11.3%) by +30.9% over the same period. Since launch, the fund has generated an Upside/Downside Capture ratio of 3.7x. During the up months of MSCI China, the fund has produced an Upside Capture ratio of 2.2x. More importantly, during the down-months of MSCI China, the fund has produced a Downside Capture ratio of 0.6x.

Longer term holding periods and themes
Triata's proprietary database can process large amounts of data continuously generating real-time insights. Triata's strength is in identifying investment opportunities driven by themes related to Greater China. For instance, Triata has been tracking closely the evolution of the e-commerce sector in China ranging from 3P model to 1P model, social elements, live streaming, increased penetration in tier 3 and 4 cities, community buying and online grocery and identifying winners and losers as new business models continue to develop. The average holding period on longs is two to three years, based on extensive due diligence. The edge comes from aggregating and interpreting data, and the goal is long-term investment performance. The strategy can invest across all cap sizes but is mainly focused on large to mega cap stocks; exclusions cover ESG negative screening. Triata has high conviction and can size longs up to 15% at market.

Constructive on China stock picking
In May 2022, Ho is constructive on Chinese equities, given the backdrop of economic growth, low absolute and relative valuations, thematic sector growth stories and stimulative monetary policy. Yet his strategy also profited during the market setback in January 2022 (+8.4%) and April 2022 (+5.0%), where short positions made a strong contribution.

Single stock shorts
Triata only shorts single stocks from a bottom-up perspective and prefer not to use sector or factor baskets or indices. The potential universe of short names is growing thanks to financial deregulation. Shorts are motivated by the 3Fs, "fade, fad and fraud", and they are more tactical and diversified to weather potential short squeezes. The average holding period on shorts is three to twelve months with a focus on near term catalysts. Triata has developed statistical indicators that help to identify potential fraud based on inputs including financial statements, etc. This AI algorithm picked up a celebrated case involving a retailer of hot beverages and several China A shares companies.

"The strategy was run with friends and family money at first because it took time to assemble the right talent and develop our in-house proprietary alternative data platform (TriataAlpha). Over time, investors will see that our alpha generation is very different from that of other fundamental funds, and our return profile is already uncorrelated. In the near term, Triata is very focused on delivering alpha through its flagship equity long/short fund. Our deep fundamental plus alternative data DNA process and the culture of the firm is our core edge that will continue to compound, and we have a long-term vision," says Ho.

Founding Partners
Aionite Capital
Zurich, Switzerland

Marco Hoegger + Sandro Braun

Adaptive and dynamic machine learning for evolutionary systematic macro

Marco Hoegger Sandro Braun

Aionite is a combination of *Aion*, a Greek term meaning eternity and symbolizing the manager's long-term approach, and *kite*, a majestic bird common in Switzerland that likes to hover over the fields and meadows, symbolizing its top-down macro investing approach. Already, a long-term Sharpe ratio around 1 in a 20-year simulation has been matched by the firm's live 18-month track record.

Before launching Aionite Capital, the founders, Marco Hoegger and Sandro Braun, spent ten years working together at ZKB and Swisscanto, Switzerland's third largest asset manager, where Hoegger headed a team of nine portfolio managers including Braun. They managed discretionary fixed income and currency strategies north of CHF 24bn, but were able to build systematic sleeves, for example a fixed income momentum/reversion strategy based on an academic paper they authored on SSRN, *Finding Value in Momentum*. Some raw signals from their alpha-generating engines and processes are still used today by Aionite.

Both founders already demonstrated their ambition and passion for managing money during their studies. Hoegger has always traded his personal and family money and Braun worked for a successful hedge fund, B&I Capital, while still studying. Both studied finance at the intersection of computing, both were exceptional students, and both are proficient coders, and this feeds into their ways of modelling markets and choice of statistical methods. "We need computers to cope with high dimensionality and non-linearity," says Braun.

Aionite Capital is an official startup from the University of Zurich, which is among more than 100 startups since 1999 to obtain the UZH startup label, further underlining their commitment to scientific investing. The founders' novel way to combine investment signals, called "evolutionary investing", makes use of machine learning portfolio construction and dynamic re-weighting methods that have been influenced by academic study and research in finance, physics and IT. "Evolutionary finance, pioneered by Professor Dr Thorsten Hens at the University of Zurich, is a key influence amongst a wide variety of academic research," says Hoegger. Hens has for instance used both psychology and biology to develop economic theories of investor behaviour. There is some further collaboration with their alma mater. Braun also works as a lecturer at the university and has carried out research into text and natural language processing (NLP). "We have developed proprietary research, based on strict statistical and plausibility tests," says Braun.

The founders' view of the markets has always been that of global macro managers. "Markets are adaptive, complex and evolving so no single asset class or strategy will work all the time. We trade five asset classes, using forwards, futures and some options on futures, and use our algorithms to rebalance market and strategy weights," says Braun.

Rebalancing signals and markets through changing regimes

There are at least 70 signals per market. Machine learning algorithms then probabilistically select the best combinations of signals for the prevailing market regimes. "Strategies fight for survival in a Darwinist environment and signal weights could be reduced to zero if the algorithms do not assign a profitable probability to them. The weightings vary with regime-conditioned probability forecasts. For instance, momentum works better in a trending market and carry works better in a calm market regime. But our concepts of regimes are much more granular than simply risk on versus risk off," says Hoegger.

One aspect of market regimes is explored in a paper Braun published on SSRN, *Business Cycle Clustering and Asset Returns*. Though regimes are a nuanced concept, some generalisations can be made. The signals tend to work best where there is some history of the market climate, or when history at least rhymes. "They have historically done best during recessions. A completely unprecedented market environment or exogenous shocks are more difficult for the machine learning models to work with," says Braun, whereas changing patterns of volatility and correlation can be modelled from history. "The models can handle different volatility and correlation regimes – and the positive correlation between equities and bonds seen in early 2022 is not so unusual. It was also observed during the taper tantrum in 2013," points out Hoegger.

This nuanced regime analysis also translates into a fairly granular style of trading. Aionite tend to scale in and out of longs and shorts, rather than make binary shifts in direction. "Average trade duration of 1.2 times per week works out at annual turnover of roughly 25 times but the directional positioning changes less often – on average once every two months," says Braun. Most trades adjust position size and there is nearly always some exposure in all markets, bar rare occasions when long signals exactly counterbalance short signals, or when the models are reversing course between long and short positions. In either case, the position size could be tiny or zero.

Dynamic risk budgeting and tail risk optimization

Risk budgeting is also correspondingly opportunistic. No constant level of volatility is targeted, though there are ceilings for risk metrics such as Conditional Value at Risk (CVar), which has ranged between circa 1.5% and 6.5% per week. "A ceiling on CvaR is also designed to make the program more resilient to changes in correlation patterns and tail events," says Braun.

Portfolio optimisation is partly driven by various tail risk parameters and techniques, such as hierarchical clustering and maximum tail risk diversification. Though tail risk diversification is a constraint, it is not a tail risk strategy *per se*. A pure tail risk strategy would tend to show a strong positive skew and the managers judge that a trade-off exists between positive skewness, and both returns and Sharpe ratios. "In general, we prefer higher returns over a positive skew," says Braun. The historical skewness is close to zero depending on the periodicity of data used to calculate it; daily data shows a slight negative skew and calendar monthly data a slight positive skew. More broadly, the pair do not think skew is anyway the best measure for strategy evaluation: "We prefer measures such as return compared to CvaR or returns compared to average underwater periods (known as the Ulcer index). These lead to a selection of strategies with shallow drawdowns and faster recoveries," says Hoegger.

Five families of signals

The multitude of signals can nearly all be consistently grouped under one of five well understood factor umbrellas: value, carry, momentum, sentiment and macro. The signals are thus grounded in an economic and scientific rationale, and some apparently exotic or esoteric indicators can be distilled into more familiar categories. "The five groups are a way to organise chaos and allocate to risk clusters. For instance, text analysis often reveals sentiment that is correlated with the momentum factor," says Braun.

Directional and relative value

There is no *a priori* bias to any family of signals. On average, there are more directional than relative value signals, but as with other variables, the split does change over time with the algorithm allocations and can also be defined differently. For instance, directional trades applied to spreads could be momentum or mean reversion based and the concept of mean reversion is different for directional and relative value trading. "For directional trading, it represents short term fluctuation around a long-term trend. For calendar spreads on commodities, the strategy tries to exploit stationarity properties in a weak form of arbitrage," says Hoegger.

Defining price and fundamental data

Some systematic macro strategies use purely fundamental data, and some CTAs use only price data, whereas Aionite is more of a hybrid. Data is on average two thirds price-based and one third fundamentals or sentiment, though again the balance will vary according to the allocation algorithms, and there is no formal minimum or maximum for either data type. In any case, Aionite's definition of price-based data is broader than many managers apply: "Our concept of price data includes forward and yield curves, implied volatility, open interest and volume, liquidity and even seasonality," says Braun. Thus, price-based data also encompasses price derivatives, and some market microstructure context.

Appraising alternative data

Machine learning techniques are often associated with alternative data, but there is not necessarily any link between the two. Aionite uses some alternative data and alternative transformations of traditional data but is sceptical about whether some fashionable forms of alternative data will add value for their style of systematic macro trading. "Some of the more hyped alternative data, such as text data from news, central bank statements, Twitter, satellite data, and special Flow- and Positioning-Data has not passed our strict tests. After proper testing and robustness checks, we often had to reject any significant added alpha, contrary to our hopes," says Braun. More specifically, he believes that, "Some studies showing alpha from alternative data are based on over-fitting and cannot withstand robustness tests. Central bank data is especially prone to overfitting since there are not enough datapoints and new terminology is only understood with hindsight".

Applying appropriate statistical techniques to different stages of the process

The model was made more robust by well-established techniques designed to avoid over-fitting: averaging out parameters and strategies, also known as bagging in the machine learning community. More specifically, the multidimensionality of financial markets is addressed through techniques including non-linear methodologies. At the signal creation level, non-linear techniques, such as machine learning (ML) and clustering algorithms, are used to create signals while deep neural network (DNN) or boosting algorithms help to allocate amongst them.

Given the emphasis on intuitively sensible signals, Aionite are careful in choosing when and where to use supervised and unsupervised algorithms. "Unsupervised ML algorithms are helpful tools. But as for any tools, you need to apply them to the right tasks. Being proficient in ML or computer science is certainly nice. However, a good domain knowledge and a deep understanding of the underlying data is even more important. Unsupervised ML algorithms (such as dimensionality reduction, clustering or manifold learning) are used at the pre-processing stage, for smart data summarization and aggregation. At the signal generation level, dimensionality reduction techniques are especially useful to filter out noise from data. For instance, where there are over 1,000 macroeconomic variables, dimensionality reduction techniques can be useful," says Hoegger.

Later on, supervised algorithms are used to tailor signals to the market environment. For portfolio construction, stacking or ensemble learning techniques, rather than individual market level optimization, are used. "This provides more training data and is more robust," says Braun.

Operational outsourcing

Operational and regulatory infrastructure is outsourced to Zurich-based platform, Pernet von Ballmoos AG, which has plenty of experience of working with funds. They provide a Swiss FINMA regulatory umbrella, and handle fund administration, risk, compliance and legal. The prime broker is BNP Paribas.

Investor base

The strategy started with mainly friends and family money and has over 70 investors, including portfolio managers of other funds, investment bank proprietary traders, entrepreneurs, a private bank and some other institutions. The founders are fully invested with their own money and think that it is very important to have substantial skin in the game and aligned interest with their investors. Aionite are in discussions with funds of funds, funds of CTAs, wealth managers and platforms, in Switzerland, Europe, the UK and US. "We could contemplate doing some form of acceleration capital deal. We recognize that some potential investors await a three-year live track record before allocating," says Hoegger.

Novel customisation concepts

In addition to a Swiss FINMA regulated fund, there are managed accounts run *pari passu*. Separate accounts could also be customized to investors' preferences for neutralizing traditional or alternative factor exposures. "For instance, investors who already have exposure to a traditional trend following strategy, could invest in a version with zero correlation to momentum, or indeed any other factor or index. The neutral benchmark position could also be defined in terms of a classic 60% equities, 40% bonds portfolio," says Braun.

In effect, the distinctive Aionite strategy can be calibrated as an overlay for any existing portfolio of conventional or alternative, and systematic or discretionary, strategies.

CIO
GaoTeng Global Asset Management
Hong Kong

Desmond How

Navigating global emerging markets credit: striving for exceptional alpha whilst efficiently minimizing downside

GaoTeng Global Asset Management is a multicultural firm strategically invested by technology conglomerate Tencent Holdings and Hillhouse Capital Group, whose founder Lei Zhang featured in *The Hedge Fund Journal's* 2012 edition of Tomorrow's Titans. "Combining the superior investment ability of Hillhouse and pioneering internet technology of Tencent, GaoTeng is committed to delivering top-notch investment outcomes to domestic and global investors," says GaoTeng fixed income CIO, Desmond How. With decades of experience and investment discipline, How is known as a persistent alpha generator as well as a beta manager.

How leads a multi-award-winning team of seven investment professionals at GaoTeng – with three main risk takers having over 70+ years' experience in aggregate – who are dedicated to deep dives into the global emerging markets. How and his culturally diverse team adopt a unique approach to extract alpha from selected themes utilizing fundamental analysis, whilst dynamically managing risk to minimize market downside risk for investors.

Global emerging markets: a rich canvas for alpha generation
How invests in emerging markets credit globally, using fundamental credit analysis to exploit inefficiency in a broad, deep and recognized asset class that attracts Asian commercial banks, global pension funds, international insurance companies, and local private banks and wealth managers. "The market has widened out over my career. In rough terms, the US dollar emerging market bond universe contains $1 trillion of sovereign, $1 trillion of quasi-sovereign and $1 trillion of corporate debt," says How. With more than 80 countries and thousands of companies, there are myriad unique events and esoteric investment thesis to express views on.

Capital gains, not carry
Although some credit hedge funds use a levered income approach to magnify portfolio yield, How is a fundamental investor focusing on generating capital gains from accurately anticipating credit spread tightening and widening. He also hedges currency risks, and substantially hedges interest rate risk to isolate the credit risk component. "Fundamental investing is the bedrock of our approach. We invest in the future trajectory of a credit, not the present," says How.

His trading mentality focuses on spread changes rather than carry because this is a larger return driver over typically multi-week or month holding periods. "We are long into a 12% bond not because we want to sit on it for a year to clip the coupon, but rather we aim to get similar return from spread compression within weeks or months, upon the fruition of an investment theme. Sometimes we were even net payers in terms of yield. Conversely, we have no qualms in shorting a 12% bond if we think the credit is a potential downgrade or default candidate," says How.

Dynamic risk budgeting and dry powder
"Though the strategy relies on participating in directional moves, it also maintains tightly constrained losses. The principle of minimizing losses permeates my trading habits, where my investment process starts with risk budgeting and ends with risk alignment. This gives investors plenty of comfort as we set the perimeter and telegraph risk-taking ahead," says How.

Just as market cycles vary greatly, so too does the risk budget for an active and dynamic manager like How. In more specific terms, he uses a distinctive metric for ex-ante risk management, dubbed PV 10%: "We dynamically allocate our ex-ante risk using PV 10% as the key measurement, which is based on 10% movement on the credit spread of underlying positions considering credit spread is our main source of return as well as main source of risk. It is calculated as the value at risk divided by market value".

He traded a similar strategy for nearly a decade at Nomura, whereas the current strategy has been tailored and optimized. "Strategy at GaoTeng was recalibrated to fit inside more rigorous risk parameters. We set a strategic 4% ex-ante risk budget over a typical 10-year credit cycle," says How.

He very seldom uses up the strategy's risk limits and keeps some dry powder to opportunistically deploy. "That was deliberately conservative partly because forecast risk can understate likely realized risk at the nascent and final stages of a cycle. In the belly of the cycle where there is higher degree of market certainty, we would be more comfortable using more risk," explains How.

Relationships locate liquidity
Whether tactical positions are held for typically less than a month or strategic ones for more than a month, liquidity is essential, and this has changed over the years: "Liquidity was good until the GFC in 2008, whereas the sell-side today is doing less intermediation and holding less inventory. Electronic trading based on RFQs (request for quotations) can be useful for smaller tickets but for larger trades of 10-20 million we still benefit from relationships". How expects to be able to liquidate the book in five business days with minimal frictional cost: "Most importantly, liquidity is only afforded to the best counterparties. Indeed, our public hard-currency bond tilt and high-churn strategy have put us in good stead when dealing with brokers during such periods".

Thematic alpha seeker
Notwithstanding a vast and deep global emerging markets asset class, How's strategy expresses an eclectic suite of themes to identify the best "ahead-of-the-crowd" opportunities, where he utilizes a thematic filter to narrow down the investible universe. "We don't profess to cover each issuer within the universe but focus on those with high-quality alpha potential." Typically, one common theme is to spot the right rating bucket. Over his career, How has often seen a credit cycle of seven-year bull and three-year bear markets: "In a credit bull market, we look to identify rising stars candidates which will be upgraded from high yield to investment grade, and might see their spreads compress by 150 basis points generating capital gains of perhaps 8-10 points on a five- or six-year bond. In a credit bear market, we focus on 'fallen angels' that will be downgraded from investment grade to high yield with spreads widening significantly".

Capitalising on Covid volatility
Back in 2019, How believed that global credit markets had already entered into a bear cycle, as the 4Q 2017 default rate was at record lows and spreads were very tight. "Default rate and credit spread are two crucial barometers to gauge the credit market," How explains.

Although he was briefly tactically long in January 2020 to exploit seasonality effects, he aptly switched back to a bearish bias and rebalanced the risk budget, as he saw markets were too complacent towards the virus. "There was not even a window for investors to capitulate into during the first week of March 2020. Valuations were thrown out of the window as investors ruthlessly hit bids to raise cash to meet margin calls or fund redemptions," How recalls.

While the extent of the global liquidity crunch was not expected, How's theme identification was still highly successful, attested by the significant alpha generation even while utilising a very small risk budget. "Thematically, we looked for sectors that were vulnerable to a supply chain disruption. Aviation, autos, commodities were identified, based on extensive comparative research of crises including 9/11 in 2001, SARS in 2003 and the Japan nuclear disaster in 2011."

China property: recognising the writing on the wall
Despite China's economic resilience, its credit market marches on a different drumbeat that closely follows regulatory policies that create boom-to-bust cycles. The most recent crackdown resulted in a distressed property sector. "Chinese property high yield is expected to have two consecutive years of default rates around 30%. The headline yields on high yield indices are probably much too high since they annualize returns on short-dated bonds that are likely to default rather than repay par," says How.

This could be a value trap. "Recovery rates could be as low as 25 cents on the dollar and maybe even lower for offshore USD bonds, which are effectively subordinated because they are issued using an SPV (special-purpose vehicle) that has no claim on onshore assets. Previous Chinese defaults cycle after the GFC was the university bonds – all deemed as SOEs (state-owned enterprises) – and onshore creditors got the first claims while offshore investors recovered cents on the dollar," recalls How.

How has been spot on with his calls on China property and his nimble approach and tactical risk budgeting on the sector have been successful, whereas now he reconfigures the portfolio towards quality names and is also cautiously invested within trading ranges. "At this stage with average bonds trading around 30-40 cents on the dollar we would not flog a dead horse as there is some convexity in the potential payoffs."

The resolution of the real estate situation will involve a delicate interplay of policy factors that needs sensitive and localized bottom-up analysis. "POE (privately-owned enterprise) developers are living on borrowed times, as contracted sales plunge, depriving them of the main source of cashflow for debt repayment. Additionally, we have serious doubts on them continuing as going concerns, with land bank life of less than two year's industry average and their replenishment capability crippled. It was also suggested that the SOE acquire projects from distressed developers to help alleviate their liquidity situation, but the main question is whether all the rhetoric will translate into concrete policies and forceful actions that can be a game changer," explains How.

Commodity super cycle
Commodities are another huge alpha-hunting ground within global emerging markets, as How believes that the post-pandemic shortage has kickstarted the next super cycle. "The previous super cycle was the result of China expanding at 10% GDP and becoming the biggest global consumer of coal and metals. Nonetheless the 6% GDP trend growth still represents 40% of marginal global GDP contribution," says How. He expects China's 'Belt Road Initiatives' and the US once-in-a-generation Infrastructure Bill will continue to drive a global commodity boom.

Politics and geo-politics
In late 2021, How was concerned that, "The rise of geopolitical competition for local and regional influence in Europe would escalate and become persistent, considering Russia had repeatedly warned of retaliation on NATO flirting with Ukraine's inclusion, further deploying weapons or soldiers on the border". He formulated geo-political risk as one of his key investment themes into 2022, which played out in February, when Emerging Europe sovereigns lost a whopping 23.4% on the month according to Bloomberg*. "Everyone must be surprised by how fast the geo-politics in Eastern Europe have unraveled. Russian stocks and bonds became almost worthless on paper overnight when the US slapped sanctions on the country and her strategic state-owned corporates," says How.

Emerging markets moral hazard
Restructuring of sovereign emerging markets debt is another theme that GaoTeng are examining. The pandemic has galvanized the IMF (International Monetary Fund) into stronger action to help the weakest nations, which may have budget deficits of 10% or more, and debt-to-GDP ratios between 80% and 160%. "Relief packages can delay solvency problems and kick the can down the road on defaults for another three to five years, which provides an investible window of opportunity to buy into some IMF sponsored papers. Certain African countries, for example, may be mispriced if the debt is trading below the expected haircut upon restructuring," says How.

Nascent ESG in Asia
How's aspiration to foster good market practices in the emerging markets is one example of 'impact investing' which he hopes will lead to spread compression on 'green', 'social' and 'sustainability-linked' bonds, as well as on issuers of vanilla paper with high ESG scores.

However, GaoTeng is very practical and selective in this space: "We are wary of greenwashing risks and find ESG commitments in bonds are not always binding or subject to legal recourse. It is still a very nascent market in emerging markets and particularly in Asia, whereas Europe is at the forefront. We are increasing due diligence, and asking tough questions during investor roadshows on environmental, social and governance topics rather than simply ticking boxes," says How.

Given that How plays a credit divergence theme where he also shorts ESG-defiant issuers that could raise their cost of financing, he reckons his investment style is even more impactful than most buy-side managers.

**Source: Bloomberg, as of 28 February 2022.*

Founder, CIO and CEO
Adaptive Hedge Fund Management
Linköping, Sweden

Alexander Hyll

Identifying paradigms with a quantamental approach

Structural shifts are a constant in an ever-transforming world, creating new opportunities and challenges for industries, businesses and individuals. Determined to capitalize on structural winners and losers from these shifts, Linköping-based manager Alexander Hyll launched Adaptive Paradigm Alpha in early 2020. Following more than two years of successful management and several hires, Hyll and his team are launching a fully authorised alternative investment fund with the same strategy and name in the third quarter of this year.

Ahead of founding Adaptive Hedge Fund Management, Hyll perceived two market gaps in the Nordic hedge fund space: "There were very few quantamental equity long/short funds that combined quantitative analysis with a fundamental overlay," recalls Hyll. "But more importantly, even fewer offered a genuinely market neutral return profile with low correlations and volatility."

His large cap global equity market neutral strategy, Adaptive Paradigm Alpha, has achieved target returns of 10-12% and volatility of no more than 3-4% during the first two years. Absolute return generation has been almost evenly balanced between long and short positions, and beta has been near zero. The largest drawdown has been just 0.73% using daily data and 0.31% on calendar monthly data.

Hyll explains finding strong causal links is paramount to the strategy. "While there may be distractions in the shorter term, we believe that the economy is operated by people who are mostly rational. This means that a certain stimulus or measurable trend has a given foreseeable effect. Based on this conviction, we look for measurable relationships and trends in the market where we can connect a cause and effect. We view connections between such relationships as paradigms."

Paradigms might sometimes be long/short pairs, but they can also have three or four or more constituents including various hedges. "We have found that investing on a relative basis has several advantages compared to individual long or short positions. It really suits our strategy and goal well," says Hyll. "A significant change to certain value chain will affect that landscape forever, and regardless of the direction of the general market, some companies will be preferred over others."

Over 100 tail risks are monitored and those surpassing certain thresholds can be hedged with a mix of currencies, commodities, and sector ETFs. A paradigm has a soft target of 30% performance,

but a hard stop at -10% loss. "The majority of our paradigms are structured using single name equity options, so the hard stop is built into the position from the start," explains Hyll.

Proprietary data and quantamental process

Quantitative analysis is used to test and corroborate fundamental theses, including statistical regressions and clustering to gauge if the postulated linkages are working. Proprietary datasets are gathered from research institutes and web scraping. The data includes some traditional fundamental and macro data, but alternative data could be as much as 70% of the mix, with examples being companies' carbon footprints, credit card spending and electrical networks in China.

It is not easy to define an exact percentage split between quantitative and discretionary inputs because their relative importance varies between paradigms. On balance Hyll estimates that, "The process may be more quantitatively driven, with human discretion a sanity check for market risk or company risk outside the algorithm. Equally, in some cases quantitative analysis disproves a fundamental view".

Believability and consensus driven culture

The team of five in-house includes two investment professionals, a COO, a quantitative analyst and a software coder. The general company board includes senior people with operational, risk and compliance expertise. Hyll has ultimate responsibility as CIO, but the firm's believability culture creates a democratic and meritocratic forum for competing ideas. "For instance, I am more quantitative whereas co-portfolio manager Arin Kamangar is more fundamental, so his view carries more weight in fundamental matters. Arguments need to be backed up by evidence and so far, nearly every decision has been consensus-based after internal discussion and debate," says Hyll.

The culture is partly inspired by Bridgewater principles but has also been modified to fit the Adaptive culture: "Radical truth and transparency is intended to synthesize where we do not agree, create trust to accept feedback, and take personal prestige out of our decision making. We are all working towards common solutions and goals," says Hyll.

Examples of paradigms

Idea generation for a global mandate can seem like a big task. Hyll explains that the team is structured in its research. "When researching paradigms, we find ideas within global megatrends such as new technology, ongoing socio-demographic change or sustainability, or in smaller more sector or geographic specific trends or disruptions."
A profitable US semiconductor paradigm shorting Nvidia versus AMD had several drivers. "As GPU architecture shrinks down to 3 nanometres, it is harder for Nvidia to maintain an advantage. Nvidia said it gained a temporary boost from taking a huge market share in crypto mining where its kernels were suitable, and others were not," explains Hyll.

A "smart farming" paradigm encapsulated two megatrends in one position. "In order to solve the increasing need for food for a growing world population, digital and automated precision farming tools are needed to increase crop yields. In addition, environmental goals require reduced use of fertilizers and pesticides," points out Hyll. "We reviewed the status of the agricultural fleet in the US, and together with high crop prices and low interest rates we assessed conditions were favorable for an investment cycle." This trade was exited after the fund's long position was acquired by a global machinery company, but it could be revisited in some form in the future. "This trend is still ongoing, and we believe elevated crop input prices and drought will contribute to an increased awareness for agricultural efficiency," remarks Hyll.

Style factor and Covid exposures

The big picture mega trends might sound like they have a growth bias – and possibly would do for long only or long biased investors – but Adaptive's paradigms contain hedges, most of them are smaller trends, and some of them are wagering on losers from disruption. "During our company selection, no style factor, whether it is growth, value, or cyclical, will make up an outsized part of the fund. We spend much time monitoring concentration risks, both when introducing a new paradigm to the portfolio, and also on an ongoing basis as new macro factors appear. Our balanced long/short attribution is a result of evenly distributing bullish and bearish biased themes," says Hyll, and other style factors are managed *ad hoc*. Controlling Covid risks required some deliberate adjustments. Hyll reckons exposure to either 'stay at home' and 'reopening or normalization' themes was pretty much neutralized and balanced. "Macro themes come and go. The fund had positive performance during the first quarter of 2020 and 2022, both difficult periods, and that is something we are proud of," says Hyll.

Hit rates, time frames, and exit triggers

After going through a diligent analysis and thorough feasibility stage, around two ideas per quarter become paradigms and 90% of them are invested in eventually, but some may spend time on a watchlist before being activated. "If a paradigm adds to concentration risk it might need to await exits from other paradigms to find its place," says Hyll.

The intended holding period of a paradigm is 12-18 months but can be shorter if a profit target is met sooner or if it gets stopped out; the average life so far has been just under one year.

Over the past year out of ten paradigms in the portfolio, two have hit their stop loss, and some others have been exited at smaller losses. "E-broadcasting was a theme where we relied on sell-side research that overestimated some companies' sensitivity to the theme. We later found it was other companies that were benefiting from it. In response we made changes to the use of sell-side research, further investigating sensitivity factors as part of our primary research," says Hyll.

Paradigms can also be exited if disqualifying risks, including ESG risks such as bad governance or environmental factors are identified; in one case there was implicit oil exposure that Adaptive did not want to hedge.

ESG

Many paradigms have an ESG dimension. An energy efficiency and renovation paradigm is based both on the growth prospects of the companies, driven by EU support packages, and probable investor demand for the stocks with a clear sustainability profile, whether EU taxonomy aligned or not. Adaptive are monitoring paradigms' alignment with the evolving EU taxonomy, but not targeting any specific percentage alignment.

An opioid theme has identified alternatives with lower risk of addiction, misuse, overdose and potential to treat abstinence. "This has a social dimension though that is not the primary driver. The main thesis is based on the need for healthier alternatives less prone to overdoses at a time when one of the largest drugmakers has exited the market," says Hyll.

Adaptive anticipates making disclosures under SFDR category 8 and are closely following how the legislation will be implemented. "We want to leave a sustainable financial footprint," says Hyll.

Carbon markets are being monitored, though Adaptive has not traded it yet.

Leverage, beta forecasting and rebalancing

Gross exposure, including delta-adjusted option exposures have historically been around 200%, which is one reason why the strategy has undershot its volatility target – and some factors are being recalibrated to raise volatility and returns closer to targets. Gross exposure is determined by a range of factors, including realized and implied volatility, recent performance, and the Kelly criterion: "We look at mathematics and game theory around optimal bet sizes," says Hyll.

Adaptive has developed a proprietary method of forecasting beta, partly to enhance hedging efficiency. It is based on both historical and forecast variables, which is logical when the investment philosophy seeks new patterns of correlation. "Historical volatility is compared with the estimated impact of correlations in relation to drivers," says Hyll. Adaptive has also devised its own beta model, which blends elements of the CAPM and APT. "After starting research, we found some inspiration in earlier academic research, but decided to go in another direction. Our beta provides a better benchmark for hedges: they are 5-7% more effective using the in-house beta forecast than a standard benchmark." The techniques were developed by the quantitative analysis team, which has support from one member of the investment advisory board, Professor Martin Singull, a specialist in multivariate statistics, who helps to validate models, methods, and applications of time series.

The strategy allows limited breathing room for beta exposure, not to make deliberate directional bets, but rather to optimize the transaction costs of rebalancing. "Maintaining strict beta neutrality could be too expensive when asset volatility can move beta exposure significantly on a daily basis. Typically, we rebalance to keep beta within a range of +-5% and estimate that this rebalancing costs around 1% per year in more volatile periods," says Hyll.

Dynamically optimizing option structures

Most trades are expressed through option spreads, though the balance between options and cash equities varies with option market liquidity, which has deteriorated in 2022 according to Adaptive.

Precise option structures also adapt to market conditions. Higher option costs can lead to using more out of the money strikes. The gap between implied and realized volatility on the benchmark further influences the balance between debit and credit option spreads. "We prefer to be long of premium but had a period of being biased to credit spreads. Trading costs are another factor we take into consideration. Implied volatility on options has also pushed us back toward credit spreads recently," says Hyll.

Most of the options are plain vanilla, one to one ratio spreads, though other ratios can be used to offset vega or gamma. Exotics have not been used. Nearly all the options traded are exchange listed, though there could be an occasional OTC or swaption.

Adaptive have backtested the use of options compared with cash equities, and found it adds an average of 1% per year, of which 90% came from net receipt of premium income and only 10% was from capped downside; it has been rare for the paradigms to gap through the hard stop of 10%, and this is another possible reason to review tightness of spreads.

Service providers and vehicles

SEB is prime broker and custodian with Goldman Sachs as executing broker. A local Swedish administrator has initially been selected for a Swedish special fund. The Swedish domiciled fund will be marketed in Sweden, Norway, Finland and Switzerland. The strategy is estimated to have a capacity of $3-4 billion before meaningful alpha deterioration. There are plans to launch a Luxembourg fund, but no date is currently set.

Current soft commitments in seed round are from a hedge fund entrepreneur, companies, trusts, family and friends. Targeting a Q3 2022 launch of its special fund with early bird discounts for seed investors, Adaptive is currently in closing discussions with a large Nordic financial institution regarding participation in the seeding of the fund. Hyll states that, "This is the next step towards our goal of being a premiere institutional source of alpha".

Guyan Liu

Founder and Portfolio Manager
Miles GL Capital Management
New York

Guyan Liu launched the Miles GL long/short equity strategy in April 2017 with capital from his previous employer, Cambridge Information Group. The fundamental strategy invests in US and Chinese technology stocks with the goal of capturing the exponential growth of innovative technology products, and at the same time, protecting investors' capital from extreme market conditions. Liu's previous training and experience as an engineer and a private investor inform his analysis of technology companies' products and business models. On the long side, the strategy looks for companies with an industry-leading product, strong unit economics, and negative market sentiment, like Tesla in Q2 2019, and Datadog in Q1 2021. On the short side, the strategy identifies bubble stocks and failed concepts. Since its inception in 2017, the low net strategy delivered a low-teen annualized net return with only a 4.4% market downside capture ratio. Liu was formerly an investment director at Cambridge Information Group, a US family office focused on private investments in information services, technology and education. Before that, he was an analyst at a European family office, Invus Financial Advisors, researching equity long/short managers' stock-picking processes and investment ideas. Liu has an MS in Engineering Management Systems from Columbia University and a BS in Computer Science and BA in Economics from Shanghai Jiao Tong University. He is a CFA charterholder.

Colton Loder

Managing Principal
Cohalo Advisory LLC
Snoqualmie, Washington State

Colton Loder launched Cohalo, which is registered in Washington State (also Utah) and with the NFA, in May 2018 and started trading its flagship Dynamic Volatility Strategies (DVS) in July 2018. Though DVS had a banner month in March 2020, it is differentiated from tail risk and long-biased volatility strategies, as well as short biased and relative-value volatility strategies and associated indices. It has also profited in 2021 and demonstrated a near zero correlation to the VIX Index. DVS dynamically adapts its approach to tail risk hedging and VRP (volatility risk premiums). Analysis aims to exploit informational and behavioural inefficiencies, and the strategy can vary its exposure levels and be net long or net short of volatility. The process is approximately 80% systematic and 20% discretionary. Liquid, exchange-traded instruments are used. Loder was previously a portfolio manager in Global Portfolio Solutions at Goldman Sachs, a senior portfolio manager at Verus Investments, and a senior risk officer in multi-asset at Russell. He holds an MBA from Thunderbird School of Global Management in Arizona and a BS in Management and Finance from Brigham Young University in Utah. He is a CFA and CAIA charterholder.

Guotao Lu

Principal
Greiphyn Heights Asset Management Limited
New Jersey

Guotao Lu launched his global TMT equity long/short strategy in February 2018. He believes that value investing principles apply differently to TMT compared with older industries. His distinctive value-based contrarian investment approach focuses on disruptive transitions and inflection points, primary research from industry and academic networks, insights from other industries, and free cashflow generation valuation measures. The concentrated book picks 15-20 longs and shorts from a universe of 300 stocks. Subsectors can include payments, enterprise software and internet advertising. Thematic groups of investments include compounders and inflection points (such as Lattice Semiconductor Corporation in mid-2020); fake disruptors (such as VMEO, a business-oriented video operator), and dinosaurs (such as ATM machine operator NCR in early 2021). The strategy typically runs net exposure of 40% and gross of 100-120%, since Lu dislikes leverage. Lu was previously a long/short equity analyst on a market neutral strategy at Weiss Multi Strategy Advisors, and a long only analyst at Ariel Investments and MacKay Shields. He earlier worked in the technology industry as a software engineer for Yahoo. He has an MBA from Columbia Business School and a BS in Computer Science from Tsinghua University.

Joe Mares

Portfolio Manager
Trium ESG Emissions Impact
London

Joe Mares launched the Trium ESG Emissions Impact UCITS fund at Trium Capital in October 2019. The strategy is broadly market and commodity neutral and constrains net sector bets, but is not country neutral. It has met its single digit return annualized target while realizing a beta of near zero. Though some polluters such as thermal coal producers are excluded, Mares prioritises engagement with selected companies within the largest 300 emitters in energy, resources, materials, utilities, chemicals, transport and industrials sectors, mainly in Europe. The focus is finding mid-cap and lower end large cap companies who can improve their carbon footprint through their existing activities or changes in their business model, including innovation, rather than through buying carbon credits or offsets. Mares also encourages better carbon disclosures including scope 3 emissions. Such changes in operations and communications can contribute to a valuation rerating. He sees strong opportunities in the decarbonising industry, property and agriculture and does not believe equity markets efficiently discriminate between winners and losers from a greener world. He was previously an equities and commodities analyst at GLG and Moore Capital, and earlier ran a global equity market neutral strategy trading energy, resources, shipping and utilities at Société Generale. His career started in investment banking at Morgan Stanley. He has a BA from Princeton University.

Mark Meulenberg

CIO and Managing Partner
Masonry Capital Partners
Charlottesville, Virginia

Mark Meulenberg generates investment ideas, manages portfolios, and oversees research and trading for Masonry, which manages a long-biased, event-driven strategy with a high active share. The firm's old school value investing philosophy espouses a traditional Benjamin Graham approach, looking for deep value and special situations, and emphasising hard assets and cashflows. Mid-2022 stock picks include content, media, shipping and auto supply names trading at single digit multiples using valuation metrics on cashflow and earnings. Typical trade ideas include catalyst-driven recoveries and turnarounds and sum of the parts discounts and spinoffs. Shorts in 2022 have included a basket of unprofitable technology names, and the strategy is up double digits in the first half. Meulenburg joined Masonry's predecessor firm, VNB Wealth Management, in 2008 as a portfolio manager and research analyst. Prior to that, he ran the long/short public equity portfolio for a multi-strategy hedge fund in Charlotte, NC. Earlier, he worked in investment and portfolio management for Brown Brothers Harriman & Co and U.S. Trust Company, having started his investment career at Sanford Bernstein & Co. Inc. He has a BS in Applied Economics and Business Management from Cornell University and is a CFA charterholder.

Ashvin Murthy

Chief Investment Officer
AVM Capital
Singapore

Ashvin Murthy founded AVM Capital in 2016 to manage an award-winning fundamental systematic macro strategy which has received *The Hedge Fund Journal's* CTA and Discretionary Trader Award in 2022. The fund also came in first over a 2-, 3- and 5-year period as it has consistently delivered steady returns, delivering a Sharpe ratio over 2 for the five years ending in December 2021. The medium-term investment strategy, which has a low correlation to equities and fixed income, trades liquid instruments such as futures and options in equity indices, bonds, interest rates, foreign exchange and commodities. The analytical process focuses on in-depth fundamental economic data analysis, based on over 50 years of data, and positions are managed using a proprietary systematic framework. Recent themes include relative economic growth rates within Europe and different central banks' monetary policy cycles, such as the US tightening and China easing in 2021. Before launching AVM, Murthy led the Asia Pacific FX options team at Natixis and earlier traded FX and interest rate options including exotics, hybrids and emerging market currencies for UBS. Murthy studied Engineering at Ecole Central Paris and was awarded the Bourse d'Excellence Eiffel from the Ministry of Foreign Affairs in France. He also has an MSc in Financial Engineering from Columbia University.

Nick Nanda

Founder and CIO
Kaleidoscope Capital
Boston

Nick Nanda founded Kaleidscope, a minority owned firm, in 2014 to pursue a systematic strategy combining a deep fundamental knowledge of markets with quantitative tools. Strategies include directional systematic macro and volatility arbitrage. The investment models are based on clear, explainable economic and market relationships. A wide array of derivatives are traded across macro markets including equities, fixed income, commodities, currencies, and volatility; the firm also trades some smaller and newer markets. Mandates can be structured for absolute returns or as portable alpha versus various client-specific benchmarks, and customized research on topics such as tail risk hedging, bond replacements, opportunistic asset allocation calls, and carbon credits, is also produced. The investor base is endowments, foundations, family offices and staff. Nanda was previously a partner and portfolio manager at GMO, where he managed the anti-risk strategy in 2008, as well as asset allocation and absolute return mandates. He observes the investment committee of GMO founder, Jeremy Grantham's Grantham Foundation for the Protection of the Environment and chairs the investment committee of Boston Ballet. He has a BA in Economics from Oberlin College in Ohio and is a CFA charterholder.

Decio Nascimento

Founder and CIO
Norbury Partners
Stamford, Connecticut

Decio Nascimento launched Norbury in October 2020 to manage a global discretionary macro fund that integrates financially material sustainability risks into the investment process; Norbury pledges 5% of annual profits to the Norbury Foundation, which maximizes for impact. The concentrated multi-asset portfolio approach expresses its views using primarily fixed income, currency, commodities and equities, with holding periods of 18-36 months. Norbury also uses carbon credit offsets to make the portfolio carbon neutral. Most recently, Nascimento was the CIO at Richmond Global Compass. Prior to Richmond, he managed FICC at 3G Capital, before it was spun out into Point Break Capital where he continued to manage those assets. Nascimento was recruited to 3G Capital from Hedging Griffo's Fundo Verde, a leading global macro fund in Brazil, where he worked directly with the CIO. His career started on the securitized derivatives desk at Goldman Sachs in London. Nascimento is a guest lecturer at Yale School of Management, where he obtained an Executive MBA with a focus on sustainability. He has a BS in Economics from the London School of Economics and BA in Economics from Escola de Economia de Sao Paulo in Brazil and holds a SASB's FSA credential. He is also a member of the Forbes Finance Council, the Milken Institute Young Leaders Circle, and Aspen Institute/University of Oxford Said Business School Leading with Purpose fellow.

Sam Pellettieri

CEO and CIO
Altema Asset Management
Winnipeg, Manitoba

Sam Pellettieri launched Altema in September 2018 to apply his "quantamental" investment process to a diversified global equity market neutral strategy. Both quantitative and fundamental analysis are used for valuation, growth, quality, management behaviour, ESG and investor dynamics. The strategy has annualised in low double digits since October 2018, with strong returns in 2021 and 2022 to May, well ahead of broad equity market neutral indices. It has profited from what Pellettieri views as the bursting of a bubble, which he compares with the dot com bubble of 1999 earlier in his career. Altema has also been long of value names in sectors including defence. The strategy is not sector nor factor neutral, though there are multiple risk controls on various factors. Prior to Altema, Pellettieri was a portfolio manager in quantitative research for Investors Group and held multiple portfolio manager and research roles at other large asset managers, such as National Bank of Canada and CI Investments. He currently sits on the investment committees of two of Canada's largest 30 pension plans. He has a BCom in Finance from University of Manitoba and is a CFA charterholder.

Portfolio Manager
Trium Khartes Fund
London

Felix Lo

Embracing complexity and eschewing deal breaks

Felix Lo has been trading somewhat defensively in the first half of 2022, having rotated the portfolio towards higher quality deals and exited lower quality deals around the start of the year, and the strategy is up by a mid-single digit percentage in the first half.

The opportunity set for the core strategy of merger arbitrage remains compelling. Abundant deal flow continues, while spreads are widening due to factors including higher interest rates and credit spreads in 2022, as well as regulatory complexity.

Lo has traded merger arbitrage for more than 15 years at single strategy hedge funds and multi-strategy multi-portfolio manager houses. His experience of co-founding Granite in Hong Kong encouraged him to partner with Trium Capital, which provides incubation, seeding and acceleration capital, as well as broad operational, regulatory and distribution support. "Managers at Trium Capital share compliance, risk, back office and marketing teams, so we got to year five on day one. This de-risks the offering for institutional investors. There was also a good cultural match with Trium being family office backed and taking a long-term view," says Lo.

Lo's former employers, multi-strategy firms Millennium Management and LMR Partners, are increasingly important players in merger arbitrage, and Lo found their culture, "very professional, transparent and robust in terms of risk management". However, he missed direct dialogue building long term relationships with end investors, some of whom reached out shortly after March 2022 looking to deploy capital as the pandemic created rare opportunities in the market.

Scouring the globe for small and mid-cap alpha

The larger part of his career was spent at Sandell, where founder Tom Sandell and others were important influences: "Tom Sandell always had a very international outlook, covering more interesting markets in Europe and Asia, which can require more work and complexity. I also learned from others at Sandell who now run risk arbitrage at Sculptor and HBK".

Lo forages outside the well picked over US and UK markets and has a high weighting in small to mid-cap deals, which on average have lower deal break risk and tighter spreads. "However, there is also more dispersion in deal spreads, less broker coverage, and more potential to add value through proprietary research. At Sandell, we generated most alpha from more work and structuring on complex situations outside the US. We look at every deal but find these add most value." Smaller cap deals (market cap below $2 billion) have averaged 40% of Lo's book but are 54% in June 2022.

Continental Europe, the Nordics, Eastern Europe and Asia Pacific countries can be more rewarding than the UK: "Our top three deals this year have been two in Singapore and one in Australia, where we had high conviction in lower-risk deals". A more complex mid-cap merger in the Nordics last year proved the value of grassroots research: "Two liquor distributors wanted to merge but the market implied only a 50% probability of completion, due to antitrust concerns. We spoke to competitors, suppliers and others, and worked out that the deal could be done. In this geography, this sort of complex situation might only appear once every few years," reflects Lo. Eastern European countries, such as Hungary and Poland, also demonstrate intermittent deal flow, perhaps one every five years – compared with one or more per week in the US or UK.

Hungary and Poland are unusual for Lo, who generally avoids emerging markets due to legal uncertainties around contracts, but both countries are in the EU with strong legal frameworks. In Asia he feels comfortable with countries such as Hong Kong, with a developed takeover code and enforceable contracts.

High hit rates

Lo has been able to achieve over 99% completion rates, even including deals that eventually broke, but were exited prior to break. "We have a robust process to look at deals, decomposing risk factors to identify potential deal breaks and monitor milestones," he says.

Deep data dives

Lo has worked with Neo Tsangarides for five years, building a customized database to track all the global universe of deals and risk factors. The universe is split between clean deals, with no deal specific issues, and complex deals, which require more research due to some complication, which is typically antitrust. "Given the level of work required, each of us can cover only about five to fifteen complex deals at any time," says Lo. Data analysis combine public fundamental data with proprietary data such as expected proforma leverage, deal synergies and rationale, premiums versus peer groups, and deal multiples. "We have been tracking a rich dataset of deal characteristics to analyze its impact on completion rates and incremental returns for deals across sectors and geographies for a long time," says Lo.

Personalities and deals

The team maintain a huge database of deals, but the process is far from exclusively data driven: "We have the data but it is not prescriptive," says Lo. Game theory and personality analysis can be germane: "We call as many people as possible to see how they sell the deal and how their motivations and intentions may change over time," says Lo. He had first-hand experience of M&A joining Evercore straight out of university, working on big deals with "rainmakers" such as Michael Price and Eduardo Mestre who was chairman of Citi's investment banking division. This provided insight into deal negotiations.

Unusual deal structures and considerations

An attractive form of complexity is unusual considerations, which might include fixed, variable and contingent elements, akin to exotic options. Hedging some elements can isolate an asymmetric payoff and sometimes create free options. Various combinations of futures, ETFs and options can be used to hedge and trade unusual considerations. A recent example was an investment company consolidation in Australia with a variable exchange ratio based on the underlying NAVs of the two companies, among other quirky features, such as a ratchet mechanism for the ratio. "The NAVs could be hedged with an acceptable degree of tracking error to create an asymmetric payoff profile. Elections where investors have some choice over the mode of consideration can be another source of optionality," says Lo.

Benign and malign complexity

Specialist event-driven brokers are useful for gauging consensus, which deals to do more work on, and which deals with no coverage should be prioritized because nobody else is looking at them. "In general, we love complexity, and are happy to do the legwork around antitrust, politics and litigation. We would avoid complexity where it cannot be worked around, such as emerging market risk, bad contracts, and natural catastrophes, which are harder to handicap," says Lo.

Some more complex deals could even become short positions to wager on deal breaks, where the hit rate does not need to be as high because a failure can often generate many times more profit than completion. "A recent short in a Canadian telecoms company was trading at a 90% implied probability of completion, despite anti-trust issues, and the government sued to block the deal," points out Lo.

Actively varying turnover and leverage

Portfolio turnover could average 8-10 times but varies with the climate: "In a normal environment with steady spreads we do not trade so much. Currently with huge intraday and daily swings, we are trading around a lot more as spreads move but usually deal risk does not change that quickly".

Leverage is generally at overall portfolio rather than deal level though: "If any spread remained in unconditional deals for some technical reason, a position could be expanded to a size allowing for the estimated maximum 400 basis point loss," says Lo.

Historically, Lo has de-levered when spreads tighten to levels that no longer offer attractive risk/reward. "In 2014 we had a 6-year period when every deal had closed, and spreads were super tight. We held 40% cash at that stage, until the Shire deal broke, and spreads then blew out again. All spreads widened due to a change in tax rules that was not relevant to all deals. We rebuilt the book at wider spreads and ended 2014 with one of our best years for performance. Our discipline during that summer allowed us to take advantage of the mayhem. Recency bias is important in explaining how spreads move," says Lo.

The GFC and Covid were different: "In 2008 and March 2020 the blowout in spreads was more about liquidity risk than single deal break risk. In the worst of times investors use merger arbitrage as an ATM. Implied probabilities go from 95% to 60% even though 90% deals actually still end up closing. It is very hard to identify the bottom of the market in these situations, but merger spreads tend to recover quickly as it is a relatively short duration strategy, and we will add to deals we expect to close".

The strategy also has a tail risk overlay hedge, for a sudden black swan risk rather than a slow grinding bear market as seen in 2022: "We normally expect the hedge to have a cost and in 2022 it has roughly broken even," says Lo.

Playing defence in 2022

"In early 2022 we sold cyclical and private equity deals and took a 20-basis point hit to crystallize these losses. This has more than paid for itself now," says Lo. In June 2022 long exposure sits at 185%, which is slightly below the average of 200%, and leaves dry powder to add risk on spread widening. It is well below the 230% level seen at the end of 2021. The LMV ranges between 150% and 250%. "Overall, this is a good environment with a high volume of deals – there has not been the hiatus in deal flow seen in 2008 or 2020. Deals are motivated partly by wide dispersion within sectors such as technology, creating winners who want to press their advantage, and losers who are more desperate to find a quick fix. With disruptions from supply chain, interest rates and political events, there are also real business reasons for doing deals. But fear and financial market conditions means that spreads stay wide even on higher quality deals."

Interest rates and credit spreads

Higher short term interest rates in 2022 are contributing to wider spreads, in line with a historical relationship that Lo has modelled. "The widening of spreads has applied to both clean and complex deals, though deals with issues have widened a lot more. Yet deal break risks historically did not increase in a higher rate climate," he says.

Credit spreads have also blown out, and they correlated strongly with private equity deal spreads. "We are not sure if these deals will actually break, but at some stage banks may find an excuse to renege on financing," warns Lo.

Regulatory and antitrust risk and complexity

Another reason for wider merger arbitrage spreads, predating higher rates and credit spreads, is growing regulatory and antitrust risks in multiple jurisdictions as the political mood becomes more protectionist: "The UK has introduced a new national security law as its post-Brexit Competition & Markets Authority has re-asserted its power. In the US new leaders at the Department of Justice and Federal Trade Commission have made deeper scrutiny of mergers a centerpiece of their policymaking. In Australia the Australian Competition and Consumer Commission has been more aggressive for some time, including issuing a 600-page report on internet market dominance in 2019. All of this adds complexity and means we can get rewarded".

Pinpointing the right types of hard catalysts

Beyond announced mergers, an opportunistic sleeve can trade other event driven situations. Hard catalysts could include a few broken deals that become oversold, but this is rare as Lo finds fundamental long/short equity managers have the real edge in such situations. The team also tend to be very selective in trades that have a lot of inherent market exposure, such as valuation arbitrages from sum of the parts discounts and spin offs: "Exceptions could include short-dated trades such as announced spinoffs with complexity around flow back mechanics and technicals," says Lo.

Some other corporate events, such as rights issues or capital raisings, can spring from mergers, but they need a twist to pique Lo's interest: "We would not do a plain vanilla capital raise where the edge is getting a large allocation. Our added value would come through a differentiated view on a more complex situation".

Litigation situations will usually involve common law jurisdictions, where the US has the most precedents. "We recently invested in a US firm where 95% of its value resides in litigation. There is uncertainty around whether, how and when it gets paid, even though the settlement funds are held in escrow. We can capture a spread and have a free option on any remaining value."

SPAC arbitrage is generally too long term: "It is like a two year lock up and a lottery ticket that rarely pays off outside the crazy 2020-2021 period. We might look at shorter term SPAC liquidation events however," says Lo.

Founder and CIO
Fountain Square Asset Management
Hamburg, Germany

Andreas Meyer

Event-driven European credit alpha

Fountain Square Asset Management is the English name of the St Pauli street (Brunnenhof) in Hamburg where 32 year-old Meyer resides. Its first fund, FS Colibri Event Driven Bonds Fund, is named after a hummingbird that Meyer first beheld in the Brazilian rainforest, and his philanthropic aspirations include creating a foundation to conserve the bird's habitat.

Meyer's preferred habitat is more complex bond structures and corporate events, to find novel ways of generating alpha. European convertibles, other hybrids, subordinated debt, junior subordinated debt, contingent convertibles, and various instruments issued by banks and insurers are closely monitored using innovative quant tools he has developed, newsflow and networks. Trading opportunities arise from various corporate, regulatory and other events, including accounting issues, potential for calls, puts, and tender offers to be exercised, covenant breaches or triggers, and asset sales.

The strategy does clip healthy coupon income but has low interest rate risk thanks to generally short durations below three years, focuses on the idiosyncratic risk of the bonds instead of market beta and can hedge credit market risk. It aims to get paid mainly for company and instrument specific complexity rather than broad credit market risk.

The three main broad strategy umbrellas are recovery and high carry, special situations and opportunistic flipper engagements, though these can overlap: "Technical special situations are expected to be 50% of the book, though some of them can also have recovery elements," says Meyer.

A more granular breakdown splits the portfolio into different thematic categories including recovery; capital action; inverted curve; M&A; flipper; refinancing; government support; asset disposal or regulatory pressure.

There is also plenty of variety within each of these: "Portfolio diversification comes not only from different geographies and industries, but more importantly from different types of events with different timing. All require some specific catalysts, which could come from the issuers themselves, other firms, governments, regulators or bond features," says Meyer.

Return profile and targets

The strategy targets returns of at least 5-7% (incl. costs), though in June 2022 the running yield alone

was already 8.1% gross. Hybrids can command a significant yield premium: "Heimstaden was paying 10.18% on its hybrid versus 2.74% on its regular senior bonds and the latest drop may increase the probability for some asset liability management," says Meyer. Around two thirds of the book is hybrids including banks, insurers and non-financials.

Yet correlation to indices of high yield, subordinated financials and non-financial hybrids, and broader fixed income markets, has only been between 0.05 and 0.35 since inception. It should be low since there is some index hedging, and the unique events traded can also be independent of wider market movements. In the first half of 2022, Meyer has outperformed other special situations UCITS credit funds in the alternative/opportunistic category in the European market.

The strategy does not currently go net short, but hedges market risk. Meyer expects to launch a credit long/short strategy, which could trade single name CDS.

From Schleswig Holstein to Greece and Portugal

Meyer roves all over Europe in search of alpha, meeting companies at their offices and at conferences, and staying in close contact with traders in London and Paris. He has invested in debt of firms located nearby Hamburg or Lubeck and has also visited Greece twice in 2022, where he views short dated 2024 senior debt of the largest construction and infrastructure company, Ellaktor SA, as an unfairly neglected situation: "Other investors are avoiding Greece, even though construction is the sector that stands to gain most from the Next Generation EU recovery and construction plan, and Ellaktor could make good profits on renewable energy developments. There is a running yield of 10% and optionality from a change of control clause at 101, which might be triggered by a new corporate structure". Elsewhere in peripheral Europe, EU solidarity is leading to more tolerance of state aid, and the approval of EUR 2.55 billion restructuring aid for TAP Air Portugal gave Meyer the green light to invest: "We now expect to earn an 8% yield on a short-term bond that matures in June 2023 with EU and Portugal state support as tailwinds to refinance the bond".

Bank and insurer buybacks of debt

Regulations such as Basel III and CRR2 can force corporate events, as can call options on subordinated financial hybrids. "Legacy paper can be called or tendered at well above the prices where it has traded down to in June 2022. We have allocated more to banks and insurers in 2022 as they have cheapened."

Insurance companies' tender offers for legacy paper can generate one-off opportunities for very high rates of return: accurately anticipating an offer earned Colibri an annualized IRR of 41% on perpetual junior subordinated paper from Dutch insurer Aegon, which Meyer thought was well telegraphed by the insurer's previous public statements. He finds limited investor and sell side coverage of insurance paper makes it inefficient.

Contingent convertibles are the highest beta sleeve within financials and can also be bought in anticipation of special call triggers, but sometimes Meyer will see better risk/reward in somewhat more senior paper: "We are always looking for the sweet spot of the balance sheet. In the case of Austrian Bank Raiffeisen, we own a tier two bond instead of the AT1 with a fixed bullet maturity, where we have confidence in repayment next year. The T2 curve inverted due to market stress".

Meyer finds that whether and when banks and insurers may repay debt is subject to cultural differences across Europe: "Banks in the Netherlands and some Scandinavian countries are more inclined to call bonds at the first date for reputational reasons. But one Norwegian bank never called its legacy bonds because it viewed them as cheap financing".

There can also be surprises: "Credit Suisse recently called a bond and refinanced at a yield more than 100 basis points higher, contrary to market expectations".

Regulatory approvals add another uncertainty to the mix, and Meyer forms his own views of banking regulators: "The UK PRA's approach is surprisingly aligned with the EBA, which led me to invest in some paper from Barclays".

The main focus is in Europe, but some US bank bonds have sold off to levels in the 70s and 80s where Meyer envisages a high chance of tender offers around the 85 or 90 level.

Refinancing and asset disposals

A more challenging refinancing market can generate very high IRR when there are positive surprises. Meyer anticipates an IRR of 30% on a Swiss property bond where the company has obtained a new revolving credit facility and sold some assets. Asset disposals can be transformational from a credit perspective even for companies such as a French supermarket that are going through challenging conditions. The strategy is not pursing merger arbitrage as such, but private equity M&A deals from huge US firms, and asset spin-offs, can generate cash flows that dramatically improve credit quality.

Cross covenants

Cross covenant situations can generate interesting sources of optionality, where one loan maturity becomes shorter if another structure is not refinanced before a deadline. Meyer noticed this for a UK oil company.

Special situations

Meyer has been activist in the past and expects to become more involved in bondholder discussions as assets grow. For now, he sometimes invests in names with activist creditors. For instance, Elliott Advisers was active in Lubeck based 3D printer, SLM solutions, which received a bid from GE. Equally, Meyer has been in positions that were shorted by other hedge funds, such as Raffinerie Heide. "Its parent company in the USA may support and furthermore they just bought another refinery in Denmark which can be used as collateral as well. Thus, several catalysts are identified," says Meyer. Sometimes, a specific bond can offer a unique opportunity for a corporate action, even if the issuer overall may be heavily levered and face some challenges. This applied to an issue from frozen foods maker Arytza. Overall, Meyer is emphasizing stressed situations and avoiding distressed, though he is keeping an eye on the distressed space and meeting firms such as Aston Martin to keep them on a watchlist.

Eclectic influences

This wide variety of trades reflects diverse influences. Raised on a farm in Germany, Meyer had no prior contact with global financial markets and his parents are still surprised by his interest. He has a pan-European perspective, having studied a double degree in business administration and finance, including two years in Marseille as part of the Ecole-Franco-Allemande scholarship. Corporate events fascinated him as a student: his master's thesis, at University Leuphana Luenebuerg, on financial instruments and restructuring, was the only one overseen by supervisor, Prof Dr Johannes Jorg-Riegler, who was also then CEO of Bayerische Landesbank and on the KfW management board. Other influences included his first financial market job, working on financial data analysis, sentiment data, and writing articles for Stefan Risse, who is now capital market strategist at Acatis Investment GmbH.

At former employer Aramea, the founders Thomas Gollub and Markus Barth taught Meyer important lessons in client relationships and entrepreneurial strategy, and Senior Sven Pfeil was helpful for market knowledge. At Aramea, Meyer had a remarkably broad remit. He ran EUR 2.5 billion in two funds and some AIF: Aramea Rendite Plus and Aramea Rendite Plus Nachhaltig, which invest in European subordinated and junior subordinated debt, split 70% financials and 30% corporate hybrids. He conceived the ESG strategy, including analytics from PRI, FNG-Siegel and Eurosif; headed fixed income trading; handled regulatory reporting to BaFin, issuer roadshows, security selection and portfolio construction. He continues to manage for Aramea a buy and hold long only fixed income mandate which is part of a balanced fund.

Off the radar idea generation

Now the aim is to focus on 40-50 positions mainly in pure play event driven/stressed strategies. This is a fully active approach, which includes positions outside usual benchmarks and investment universes, which might be off limits for some mutual funds, especially in Germany. For instance, Colibri's administrator, Ampega, is Germany's third largest for insurance, part of The Talanx Group with EUR 180bn AUM, but did not until recently have various bonds, including AT1 bonds, and Payment in Kind bonds, in its systems: "Its systems could not handle a Payment in Kind bonds due to the uncertainty of cashflows – real money investors are not active in this area and that might be our chance," says Meyer.

A structured idea generation process is intended to produce a systematic and repeatable process from over 30 screening mechanisms, from multiple sources: Bloomberg EQS fundamental screening; fixed income screening; MiFID II trading volumes and sizes, and prospectus features such as Next Put Date or Payment in Kind options. New screens are regularly added: "This year I have worked with Bloomberg in London to develop a screen for inverted corporate yield curves, which uses default probabilities because most of the issuers tracked do not have proper CDS curves. Inverted curves can be a signal of stress and distress or might be due to technical issues such as illiquidity or aggressive sellers," points out Meyer.

As well as sell side and proprietary research, Meyer finds ReOrg, which has a big team of lawyers and analysts looking at high yield, a valuable independent resource that expands his bandwidth. Sarria may also be added for more coverage.

Outsourced operating model

Colibri's team is currently Meyer and his former colleague from Aramea, Jan Frederik Dreyer. Most non-investment functions are outsourced: regulatory licensing and compliance comes from FIDUS Finanz; administration and sales from Ampega Investment; Baker Tilly provides law and accounting services and prime broker UBS deals with trading. UBS was a natural choice for prime broker. "I already had good relationships with the investment banking and trading departments, and make use of their offices and research," says Meyer. He maintains trading lines with his prior network of brokers and can give up trades to UBS. Meyer expects to add JP Morgan as assets grow, where, "The Nexus platform is an attraction for credit default swap and total return swap solutions. We appreciate banks who take a positive view on Colibri's growth prospects".

Daily UCITS

A UCITS is the preferred vehicle of Colibri's clients in Germany, Austria, Switzerland, Luxembourg and Liechtenstein. The daily dealing fund runs a barbell between two sub-strategies. It keeps 10-25% in 10-15 liquid, low beta investment grade bonds, while 75-90% is in 30-40 alpha bonds.

There is a relatively low management fee, including discounted early bird fees, and a hurdle rate of 200 basis points above EURIBOR under the performance fee.

Meyer runs EUR 55 million as of June 2022, across both the Colibri event strategy and the Aramea mandate. He has been offered seed deals but could only contemplate selling some management company equity if it brought strategic benefits, such as sales, beyond simply raising assets. The strategy is attracting interest from pension funds, insurance companies, and family offices. Colibri capacity is estimated at EUR 500 million to remain nimble, or to use the more figurative German word "Schnellboot" (meaning fast boat). The Colibri bird is one of the fastest and most dynamic flyers.

Portfolio Manager
Eckhardt Trading Company
Miami, Florida

Steven Moyer

Using sentiment data to redefine contrarian trading

Steven Moyer's Sentiment Alpha (SA) strategy is the only externally developed strategy to have passed systematic CTA pioneer Eckhardt Trading Company's "gauntlet" for new strategies, which sets a high bar through a proprietary suite of tests.

The concept is disarmingly simple. Inferring investor sentiment from hard positioning data can often lead to conclusions very different from media narratives, and a strategy that is bold enough to trade against conventional wisdom – which could feel very uncomfortable for a discretionary trader – can be very rewarding. The uncrowded position can be either countertrend or trend following, which can often be contrarian in the early stages of a new trend, when other investors are in denial about moves that may mark a regime shift.

SA is the culmination of Moyer's investment journey, which started by bravely leaving a brokerage job to pursue discretionary rule-based trading with personal capital. He then steadily transitioned to systematic trading in several firms, where he developed strategies in trend, pattern recognition and mean reversion, before conceiving the distinguished strategy based on futures positioning data that has been run live since 2018, at one other firm before Eckhardt.

Trend and countertrend

The SA strategy always trades contrary to its measurement of consensus sentiment, which involves countertrend trades about 60% of the time while the other 40% of trades apply a proprietary "trend anticipatory" signal, which can sometimes correspond to traditional trend following. "In the first five months of 2022 SA has had a higher-than-average overlap with trend followers, but we entered the long energies, long agriculturals and short bonds trade earlier, in Spring 2021, when volatility was low. Several of these offered countertrend setups at very good levels," says Moyer. SA also started to exit some of these trades in June 2022 as the consensus had caught up with the market moves: Moyer argues that "The long US dollar trade could now be getting extended based on the crowd".

The strategy could simultaneously hold a mix of trend and countertrend positions in different markets. Countertrend trading can be selectively profitable within a broadly benign trend regime: "In 2022 the strategy has profitably traded some pullbacks in energy, though countertrend setups in equities and metals have proven less successful," says Moyer. More importantly, countertrend trading can generate profits during some periods that are generally challenging for trend followers.

"Trend had a good 2014 but struggled during a low volatility period for the next few years. Between 2016 and 2021 the trend following indices were basically flat, but SA annualized at 13%," says Moyer.

This period also included the SA strategy's worst drawdown, of about 18% for a 15% volatility target over 15 months between 2016 and 2017. While SA can perform during some sorts of low volatility market regimes, certain types of rangebound markets can make it difficult to profit from either trend or countertrend strategies, which results in the systems being whipsawed: "In a low volatility, range bound market you do not get such substantial unwinds of very heavy positioning," explains Moyer.

Left tail consensus exodus trades

"In contrast, left tail events of 2002, 2008, 2015, 2020 and 2022 have been the most profitable, because they tend to trigger huge unwinds of crowded positions," says Moyer. Covid is one example. And perhaps more surprisingly, in late 2021 and early 2022, SA models suggested that consensus positioning remained deflationary, short commodities and long bonds, quite at variance with the media narratives.

SA's long run average Sharpe over a 22 year backtest and live trading has been above 1, and the worst drawdown was just over one standard deviation – whereas a typical trend follower has seen their deepest drawdown nearer two standard deviations in Moyer's experience. The opportunity set is cyclical, and the first five months of 2022 has seen SA post gross profits of 52% with a Sharpe ratio of 3, both of which are the highest ever over the proforma and live trading.

Dynamic correlation patterns

The program is hard to rigidly bucket because its correlation profile is dynamic. The correlation with trend followers might average 0.5 but it fluctuates in quite a wide range between 0 and 0.7 according to market regimes. The pattern of correlation has also been very usefully dynamic with respect to equities. The average correlation has been a slightly positive 0.16 but this spiked down to -0.5 during S&P 500 drawdowns.

A good fit with Eckhardt

Moyer had offers from various firms for rolling out the strategy and chose to partner with Eckhardt for several reasons: "I had worked with Eckhardt President and COO, Rob Sorrentino, before. The economics of the deal aligned incentives. The chance to learn from Bill Eckhardt, whose legendary history in Co-Founding the Turtle Traders is something I'd read about early in my career, was another attraction. The close knit and welcoming Eckhardt team, and their broad expertise, also made the decision easier".

Eckhardt's gauntlet includes many proprietary tests, but we can reveal that less than 5% of prototypes pass; the process took some months; it involves measures of risk-adjusted returns, and the SA strategy provides significant diversification versus Eckhardt's existing family of strategies: correlations range from about +0.3 to -0.3.

SA is differentiated from Eckhardt's other strategies in several ways. It has an average holding period of 30 days against 8 days for Eckhardt, which is a constituent of the SG Short Term Traders Index. SA applies the same models to all markets whereas Eckhardt has tailored some signals, for instance to commodities. And SA's trend anticipatory trend indicator is different from Eckhardt's distinctive volatility trend signal.

The Eckhardt Research Lab has a library of proprietary techniques, including some based on AI, that could be used to hone and refine SA, but thus far no changes have been made. Moyer is busy with trading, investor meetings and participating in research projects including one looking at ETFs, which may spawn another strategy if it surmounts the gauntlet. "We could trade futures-oriented ETFs and other specific ETFs using a new model with non-price sentiment data," he expects.

The SA strategy run at Eckhardt uses a somewhat wider investment universe than a previous version managed at another CTA, and this additional diversification has improved risk-adjusted returns. At the same time, it trades only a subset of the markets Eckhardt trades firm wide. SA trades 28 of Eckhardt's 70 markets, and estimates capacity of $3 billion.

Over the years, Eckhardt has adhered to a very defined process in adding systems to the portfolio. "When Eckhardt puts together our blends (in Evolution) we have certain expectations from each system. SA has exceeded that expectation which is a rare occurrence and a testament to what Steven has built," says Rob Sorrentino.

The journey arriving at sentiment data

Moyer finds that, "Sentiment data is often viewed in the middle of a spectrum between technical and fundamental, but is really a category in its own right, that should be viewed separately from technical or fundamental data".

SA has been informed by a process that began with discretionary trading using technical analysis in a rule-based system. Moyer found personal trading to be a humbling and character-building experience: "It taught me discipline and great lessons in life. With no salary and paying my own health insurance, I had to give it 100% focus and it was a huge step to get me where I am now, climbing a steep learning curve".

While marketing a systematic commodity strategy, Four Elements in Singapore, he started researching pattern breakouts and trend. This continued at the proprietary trading firm Gelber Group and then Moyer Capital Management, where pattern recognition, trend following and mean reversion systems were developed, and traded, based on price and/or fundamental data. He also learned to code, in Python, and eventually became a fully systematic trader, partly to resist the temptation of breaking rules: "Once you start breaking rules it can be detrimental though you often learn something new. As a systematic trader, changes need to be statistically proven, which is a process," he points out. Thinking outside the box and synthesizing this experience led to SA, which is designed to have a unique edge, and low correlations: "I had become intrigued by how to measure the emotions of traders. There are lots of trend followers and pattern breakout strategies but fewer focus on non-price data. A mentor was also influential in moving me onto the sentiment data".

Statistical testing of the ideas validated Moyer's convictions: "All markets were profitable over time. They varied and some were only minimally profitable, but the returns were very consistent, which I interpreted as evidence of repeated emotional patterns. The hit rate was a bit lower than on some other systems, but the system was able to stay out of severe drawdowns, with a better equity curve than pure price-based systems, and a low correlation to stocks, bonds and trends. Being on the opposite side of the crowd is very helpful for big moves. The crowd was wrong on Covid," says Moyer.

Sentiment could be inferred from a wide variety of direct and indirect data sources, including various capital flows, investor and industry surveys, social media, NLP parsing of text, options volatility surface data and many other possibilities, but Moyer prefers positioning in exchange trade futures. "This can reveal insights into a wide variety of market participants, including options traders, dealers, asset managers, commercials, calendar spread traders and speculators, with data stretching back 30 years," says Moyer. Opaque international exchange disclosures are one constraint on expanding the investment universe; the other is liquidity, which rules out some small commodity markets such as softs and meats.

Selective scaling and patient reversals

Across 28 markets there is always some exposure, but at the individual market level, the system can be flat as much as 50% of the time. It is thus quite selective and does not usually cut and reverse between long and short stances immediately. It will more often exit a long or short and pause for breath with a flat position before re-entering in either direction. It might return to the same directional bias after getting stopped out one or more times if the system is still sending the signal. Though SA can sometimes start off with a maximum position size, it is more likely to scale in gradually. "There can be false starts before catching a big move," says Moyer.

Opportunistic volatility targeting

This selective approach also contributes to variable volatility. Though 15% is a rough guide to long run average volatility, the system is opportunistic. Annualised rolling volatility has been as high as 23% in 2022 and fallen as low as 8% at other quieter periods when there was less positioning. "We do not automatically cut a position when volatility increases to stay inside a volatility target. We do not cut it until the system signals an exit," says Moyer.

Standalone rollout

Currently the strategy has assets of $45 million, including sub-allocations from both the offshore and UCITS versions of multi-strategy program Eckhardt Evolution. Execution slippage has not been a problem and trade execution can be staggered over an extended period in these very liquid markets. "Our research suggests that it is very scalable and growing assets does not impact risk-adjusted returns or drawdowns. Capacity is estimated at $3 billion," says Moyer.

After one year live at Eckhardt it is now being offered on a standalone basis, initially through managed accounts. Moyer is seeing most interest in the overall program across four asset classes, but some investors have also requested a pure commodities version.

Kevin Pyun

CIO and Managing Partner
Dellora Investments
New York

Kevin Pyun founded Dellora in 2020 to manage a biotechnology-focused, long-biased equity long/short strategy focused on small and mid-cap companies (market cap $150mm - $10bn). Dellora's strategy is limited-capacity, ensuring its ability to freely navigate within the liquidity constraints of the firm's investment universe over time. The firm was initially launched with personal capital and capital from friends, family, and former colleagues before attracting stable seed capital from Borealis Strategic Capital Partners. Dellora is focused on identifying disruptive scientific trends and exploiting dislocations in value on both sides of the portfolio. As of mid-2022, the biotech sector is in its longest and deepest drawdown in history, which is providing compelling stock-picking opportunities. Dellora's longs aim at 2-3x upside and shorts aim at returns of at least 25%, from hyped and flawed technologies and products. Pyun was previously a partner and the Director of Research at healthcare equity long/short fund Consonance Capital which he joined at inception in 2007; he spent 12 years there before founding Dellora. Consonance had assets of $1.5bn when he transitioned. Prior to Consonance, Pyun was on the biotechnology equity research team at Morgan Stanley and on the life sciences strategic consulting team at L.E.K. Consulting. Pyun has an MBA in Finance and Healthcare Management from The Wharton School and a BA in Biology from the University of Pennsylvania.

David Salanic/Joe Kaplan

Co-Managing Partners and Co-Portfolio Managers
Whitefort Capital
New York

David Salanic and Joe Kaplan launched the Whitefort Capital strategy in 2016, which currently manages more than $500 million. The strategy pursues a value event-driven approach across the capital structure globally, including stressed/distressed credit and legal/process oriented special situations. Whitefort targets multiple paths to value creation through a blend of financial and legal analysis and process activism applied to the intricacies of capital structures, bankruptcies and liquidations, and various corporate and credit events. By investing in bundles of contractual rights that are not dependent upon market exit to generate returns, and by enforcing such rights in tested legal jurisdictions, the fund seeks to generate an idiosyncratic return stream with low correlation to equity and credit markets. Various factor risks are selectively hedged and little or no leverage is used. Prior to co-founding Whitefort, Salanic was previously CIO of Tortus Capital, a director of Fir Tree Partners and an associate in M&A and restructuring at Lazard, while Kaplan was previously a managing director at Meritage Group, a principal at Cyrus Capital Partners, and an analyst in restructuring at Blackstone. Salanic has an MBA from Harvard Business School and a BCom in Finance and Chinese Language and Literature from McGill University. Kaplan has a JD/MBA from Harvard Law School/Harvard Business School and a BA in Economics from Harvard.

John Segrich

Partner and CIO
Clear Sky Advisors
Houston, Texas

John Segrich is a founding partner and CIO of Clear Sky Advisers that was launched in January 2021, to invest in decarbonization, electrification, carbon transition and renewable energy themes. The firm does this through a long/short equity strategy, running $180m, and an environmental credits business running $1.5bn. The Lucid Clarity Fund, launched in April 2022, is a concentrated global equity long/short strategy which seeks to invest in companies focused on decarbonization, electrification, and sustainable resource usage and take advantage of the dispersion created in these emerging sectors as well as in the traditional utilities and renewable asset owners. The investment process emphasizes tracing industries from raw materials to end consumers and evaluating the entire value chain. The fund takes a fundamental approach to stock selection combined with a quantitative approach to risk management and portfolio construction. The environmental credits strategy, Clear Sky Carbon, offers investors exposure to both physical and financial futures in California Carbon Allowances (CCA's) which Clear Sky argue offer a positively skewed risk/reward and could benefit from higher inflation. The firm has two thirds female or minority ownership. Prior to Clear Sky, Segrich's sustainability-oriented investment experience included roles as an analyst as well as a portfolio manager in several investment managers including Lorem Ipsum Partners LLC, and Gabelli, where he began his career. He has a BA in Philosophy from Boston College.

Daniel Sheyner

Founder, CIO and Partner
Chimera Capital LLC
New York

Daniel Sheyner founded Chimera Capital Management in May of 2017 with $10 million under management. The firm has grown to a team of 11, managing between $500 million and $1 billion. Chimera runs market-neutral equity long/short strategies, focused on the retail, consumer, and TMT sectors. Sheyner designed the firm's investment process and technology from the ground up to take advantage of the ongoing data revolution in consumer investment research. Chimera employs a discretionary, data-driven approach to investing, relying on a curated ensemble of "alternative data" sources and a proprietary data analytics platform, developed by an in-house data science team. The investment team includes former consumer and alternative data specialists from Citadel, Earnest Research, King Street, Lombard Odier, and Point72. Chimera has delivered an annualized gross return on invested capital (ROIC) of over 20%, with zero beta to the S&P500 and no down years since launch. Sheyner was previously a long/short consumer analyst at Atika Capital and a private equity associate at Bain Capital. He holds an MBA with High Distinction (Baker Scholar) from Harvard Business School and a BA in Math Methods in Social Sciences from Northwestern University.

Josh Silva

Founder and CIO
Passaic Partners
Newark, New Jersey

Josh Silva assembled a team of colleagues that bought out the institutional asset management business that he built within Harvest Volatility Management. Registered Investment Advisor, Passaic Partners, is majority employee-owned and minority owned by Lincoln Peak Capital. It launched in January 2022 with $2 billion. All clients, including pension, VEBA, insurance, E&F and utility, along with track records migrated over to Passaic. Passaic blends systematic, rules-based investing with discretion for security selection, timing, structuring, and sizing. Its strategies, some of which started in 2013, complement or replace low-vol equity, hedged equity, hedged credit, high-yield, and multi-asset risk exposure with competitive risk-adjusted performance, liquidity, transparency, and charge only management fees and no performance fees. Passaic strategies have historically generated higher risk-adjusted returns than their comparable indices by reducing the downside using options and other derivatives. Silva held option trading, strategist, and portfolio management positions at Harvest Volatility Management, Attalus Capital, Credit Suisse (New York and London), and Société Générale (Chicago Mercantile Exchange). He holds an MS in Financial Mathematics from the University of Chicago and a BS in Chemical Engineering from the University of Wisconsin, Madison.

Vijay Srinivasan

CIO
Scarsdale Capital LLC
Los Angeles

Vijay Srinivasan launched Scarsdale Capital's fixed income strategy in December 2018 and has an annualized alpha of approximately +9% net over the JP Morgan High Yield index from inception to mid 2022. The firm does not use leverage and invests in high yield and opportunistic credit mainly in the US, with small exposures in other developed economies. Discounts to fundamental value are sought for reasons including industry, size and perceived stress. The portfolio is fairly concentrated and the top ten positions could be roughly 40% of NAV. Sector exposures have included real estate, retail, energy, along with metals and mining. Ideas can be implemented across the capital structure, including in equities and preferred stock. There have been no level III securities to date. Srinivasan was formerly Global Head of Research and portfolio manager of credit at Marathon Asset Management in New York and London. He was earlier a credit analyst at Four Corners Capital Management, and previously worked in financial restructuring at Houlihan Lokey after working in investment banking for JPMorgan Chase. He has an MBA from UCLA Anderson School of Management and a BS in Business Administration from the University of Southern California. He is a CFA charterholder.

Phil Stone

Managing Partner and Portfolio Manager
Fourthstone
St Louis, Missouri

Fourthstone is an equities fund manager founded by Phil and Amy Stone in 2014 that specializes in long/short bank sector and fintech opportunities. Its flagship strategy, which originated inside Driven Capital Management, a family office, employs a variable net exposure and has annualised at over 20% since inception in 2010. The fund trades 800+ US listed banks, of which half have no sell side research coverage. Macro analysis and scrutiny of individual bank balance sheets and loan book composition is designed to generate an informational edge. In 2022 selected US banks could benefit from wider net interest margins, migration trends within the US, M&A, the adoption of fintech and buybacks while hovering near GFC valuations, and at a historically deep discount to the S&P 500, according to Fourthstone. The strategy combines core longs, core shorts and opportunistic trades, and invests in several dozen stocks with modest leverage. It is usually net long but has a low positive correlation to the NASDAQ Bank Index and can go net short. Fourthstone also run a long only, small-cap financials fund. Before starting the strategy, Stone ran investments for family office, The Observatory, was a bank analyst at a financials hedge fund, and a regional bank credit analyst. He has an MBA in Finance from Loyola College, Maryland, and a BS in Economics from University of Maryland, and is a CFA charterholder.

Christopher Xu

Founder and Portfolio Manager
120 Capital Management (CXX)
Darien, Connecticut

CXX was founded on the principle that asymmetric investment opportunities emerge when economic drivers of asset prices change faster than institutional asset allocation. The quantitative/fundamental ('quantamental') macro strategy uses proprietary models to identify asymmetric inflection points, such as macroeconomic pivots, policy changes, and investor positioning extremes. Successful calls have included long Renminbi in 2020-2021; long Nasdaq versus S&P 500 in 2017-2020; and higher US interest rates in 2016-2018. The strategy – launched in 2015 – has generated competitive risk adjusted returns, initially for a single client and in the last three years in managed account format. Before founding CXX, Xu was CIO at family office SPNY Capital LP, where he ran a quantitative macro strategy. Previously, he managed systematic and discretionary macro for M. Safra & Co, was a portfolio strategist at Bridgewater Associates, and a statistical arbitrage trader at RBS Sempra Commodities. His career started in equity derivatives research at Lehman Brothers. He has dual Bachelor's degrees in Computer Science and Economics from the University of Chicago.

Markian Zyga

CIO and Portfolio Manager
Mission Crest
New York

Mission Crest Capital Management, LLC is a global multi-manager alternative investment platform focused on global macro strategies. The Mission Crest strategy, launched in 2019, manages both discretionary and systematic strategies. The strategy invests long and short across commodities, currencies, equity indices and fixed income, globally in developed and emerging markets, with trading time frames ranging from intraday to multiweek. Mission Crest was created within Lighthouse Partners, based on its two-decade history investing in macro and CTA strategies. Zyga is responsible for overseeing portfolio construction, capital allocations, risk management, and talent sourcing efforts for Mission Crest. Prior to Mission Crest, Zyga was a managing director at Lighthouse with a focus on quantitative and macro strategies, which he has focused on for nearly 15 years. Zyga has a Bachelor of Business Administration with a concentration in Finance and Economics from Loyola University Chicago. He is a CFA charterholder.

Founder and Managing Partner
Mount Curve Capital Management
Austin, Texas

Anand Philip

Harnessing private equity insights

Mount Curve Founder and Managing Partner, Anand Philip, always wanted to run his own business, and be in control of his own destiny. He drew inspiration from the founders of York Capital, where he helped to build out a private equity offering. After nearly two decades in mid-market private equity – including spells at Castle Harlan and Blackstone – Philip resolved to go solo. He personally piloted a public equity track record, verified by an accounting firm, before launching with his own capital and outside investors including private equity and hedge fund managers including ex-bosses and colleagues from multiple former employers, company executives and board directors, and a professor from his alma mater, Harvard Business School. "The attraction of a smaller asset base is more potential for both absolute returns and alpha, because smaller public and private companies tend to be more inefficient and thus laden with more alpha potential," says Philip.

The strategy is primarily US equity long/short, though it can also make private equity investments (inside and outside the core strategy) and has done one so far. Private equity experience and networks play a larger role in terms of the style of analysis, due diligence and channel checks carried out to build and validate long and short investment theses for public companies. "Private markets knowledge and intelligence, conversations and idea generation are married with more traditional experience in valuation," says Philip.

Longer term longs and opportunistic shorts

For both public and private equity, the strategy takes a multi-year view rather than obsessing over quarterly earnings reports, though shorts usually have a shorter time horizon. The strategy has been net long since inception in July 2020, averaging below 100% exposure, but the short book has been punching far above its weight – generating 45% of alpha vs. the S&P 500 as of June 2022, and strong double-digit absolute returns since inception. "Shorting can be episodic, and we have had a banner year shorting secular decliners as well as generally low quality, unprofitable companies, which have seen their share prices collapse by 30 to 50% or more," says Philip.

One successful short was a heavily indebted multi-level marketing firm. Philip sees no inherent problem with certain MLM business models *per se*, but in this case it was an over-levered company selling environmentally-unfriendly products without a clear moat around its business. Meanwhile, cash flow analyses showed the company would be forced to cut or eliminate its dividend to preserve lender collateral. Forensic accounting analyses showed worsening business trends. "For shorts, we like to build the mosaic of identifying multiple negative factors weighing on a company that could come together to influence its trajectory. The thesis played out within a couple of quarters as management cut the dividend, breached debt covenants and delayed financial statements, generating over a 40% realized short gain," says Philip.

The long book has made up most of the remaining double digit absolute returns. Philip is wary of crowded longs since they can fall prey to momentum reversals and hot money outflows: "Crowded longs are a closet momentum strategy that works on the way up but unwinds quickly on the way down. I prefer my core long holdings to have as stable an investor base as possible". On the short side, he is more cautious of high short interest names in a bull market, but becomes bolder in bear markets, though in either case maximum position sizes are much lower than for the longs. Shorts are capped at 3% whereas longs can normally grow to 15% and occasionally even larger, subject to getting comfort on risk constraints such as leverage, volatility and beta. The industry focus is mainly on three broad sectors: industrials, consumer and services. The investment universe adds up to a few thousand companies predominantly listed in the US, with market capitalisations generally between $200 million and $20 billion. This wide range allows for a flexible and dynamic approach to stock-picking. During the Covid crisis, Philip sometimes found small caps with no sell side coverage trading at deep value multiples with net cash and no debt. The emphasis has recently moved towards larger names: "The average market cap has risen in 2022 as we have focused on more defensive and higher quality companies," says Philip.

Quality profitable longs

Some generalisations can be made about factor exposures. Longs are less leveraged and may have some growth but will not be in the top quartile of earnings growth because such firms tend to be unprofitable, and Philip defines profits after stock-based compensation. This also rules out many of the fastest-growing high technology companies. "We do not have any long holdings that are unprofitable, but their growth rates are still reasonable," he says. Philip closely monitored the "stay at home" versus "re-opening" factor exposures, which added value in 2020 while detracting it in 2021, with little net effect. In mid-2022, Philip sees exceptional value in selected high-quality names, which can include large caps with strong free cash flows: "Here quality is defined as sustainable growth, low churn rates and reasonable valuations without needing to believe rosy assumptions," he says.

More off the beaten track, he has identified consolidation stories in lowly valued small to mid-cap industrial companies that can make roll up acquisitions of rivals also trading at low valuations, and increase market share, pricing power and margins. "The consolidators and acquirers are trading at single digit EBITDA multiples and single digit or low double digit PE ratios. Though there is some execution risk, we track them very closely to ensure they are following a solid private equity playbook and some of the executives even came from private equity," points out Philip. "A recession could even be benign for this strategy, since the targets could be acquired even more cheaply," he adds.

Public and private activism and constructivism

Philip could contemplate public activism but has not done any yet and has sometimes decided against it after consulting with other asset managers and law firms. He is more likely to be "constructivist" and indeed to pursue more discreet, private activism: "I argued that a slow growing tax preparation company should scale back poorly-conceived investment plans and focus more on cost savings and cash flows (but does not take full credit for them doing so). The projected (and actual) cash flows improved significantly on management's pivot and we made close to a 50% realized gain on that investment in little over a year".

"In another case, I suggested that a small cap company outsource its investor relations function to free up the CFO's time. Once they hired an IR firm, we discussed best practices with that firm to engage investors since the company had minimal sell-side coverage to help it do the selling."

Takeover bids

Philip had three takeover bids close in his pre-launch personal account portfolio, though he only anticipated one of them. "While I expect to own some takeover targets, it's unrealistic to expect our high market share holdings to be taken over since horizontal mergers might run into antitrust obstacles, although vertical mergers might be possible." He is nonetheless adept at evaluating which companies might be more attractive to private equity-backed buyers in an MBO or LBO.

Private equity

Philip's private equity track record between 2006 and 2019 – deploying around $500 million of equity in small and mid-cap growth and buyouts with enterprise values between $50 million and $1 billion – averaged an IRR of 25%. This spans multiple vintages, including a very bad 2007 and a very good 2009 vintage, but he estimates that it would have been at least top quartile and sometimes top decile.

Whereas some hedge funds restrict their private equity to pre-IPO, Philip usually expects to take a longer-term view. He also takes minority stakes: "Majority ownership would be too time consuming at the moment when we are focused on public equities – a 5% position could take up 25% of my time".

Mount Curve's first private equity investment, in a highly cash-generative IT staffing company, greatly outperformed expectations in 2021: "Our private equity consortium persuaded them to devote resources to move from an incoming calls model to an outbound sales effort. The business model works well with the gig economy, which is attracting a lot of IT professionals and the largest tech firms and chief integration officers are using IT consultants. This investment is likely to show a substantial profit," says Philip. Up to 10% of the strategy can sit in private equity; beyond that it would be housed in separate vehicles.

Board experience

Philip has held over 10 board roles in the past, mainly at private equity investee companies but also at others. He could contemplate sitting on some boards of long-term holdings that did not need active trading. He also holds advisory roles at his alma mater, Ohio Wesleyan University, where he has sat on the Board of Trustees for the past 11 years and is currently the Chair of the Investment Committee of its endowment.

ESG

Mount Curve's first analysis is based on non-ESG factors, before moving on to ESG analysis, which seeks headwinds for shorts and tailwinds for longs. The recycling economy lent ESG support for one investment that also had strong fundamentals and catalysts: "Since aluminium is infinitely recyclable, whereas plastic is not, the former benefits from the sustainability trend away from plastic. Private equity experience including board seats on packaging companies and seeing cost pass throughs in contracts was also useful in providing confidence that increased metal prices would be passed through to customers. A spin-off of a tinplate maker to a private equity buyer was a bonus, and I expect further non-core divestitures. The position has been a winner so far".

There can also be pairs trades within an ESG friendly sector. The aforementioned long was paired against a short in a more richly valued aluminium can maker with fewer catalysts, which has generated a 15% absolute gain, and also hedged out some sector exposure.

Philip is focused on returns and would not own the long side of the pair indefinitely because he has observed the feast and famine cycle of the aluminium industry, which may at some stage run into overexpansion and overcapacity and be forced to cut prices.

Macro and market environment

Industrial cycles will sometimes be more relevant than economic cycles. The approach is mainly bottom up driven, though Philip is alert to a range of macroeconomic scenarios and might at some stage reduce net exposure meaningfully: "I am not sure if the Fed will engineer a slow landing. I envisage a low risk of recession combined with high inflation but would probably add significantly on the short side in that sort of environment. I am open minded about a range of scenarios, which could include 1970s-style stagflation, or might repeat the 2000-2007 golden age for hedge fund equity investing, when value greatly outperformed unprofitable growth".

Team and operations

The Mount Curve team includes a full-time senior-level analyst who also brings both hedge fund and private equity investing experience to the table, as well as an MBA from the Wharton School of the University of Pennsylvania. His work experience includes roles as a private equity associate at mega-fund Thomas H. Lee Partners, a stint at a billion-dollar event-driven hedge fund and then helping to launch another long/short equity fund (with a heavy focus on shorting) before joining Mount Curve two years ago.

Operational functions are mainly outsourced to the service providers, including Goldman Sachs, Opus Fund Services, Seward & Kissel, Grant Thornton and prime broker BTIG, which has been especially supportive on the capital introductions side, by tailoring introductions to the needs of emerging managers.

Accelerators need more than money

Philip is fortunate in having been able to launch without seed capital. He could contemplate some form of fair and reasonable acceleration deal, but the ideal partner would bring strategic value in addition to capital.

A global citizen

Mount Curve can be classified as a minority-owned manager. A resident of Austin, Texas, Philip has lived in eight cities across three countries. Born in India, his Christian religion made him a minority. He spent almost a decade of his childhood in Muscat, Oman, and when he moved to the US to take up a scholarship in Ohio, he was also a minority. That repeated experience of being from the outside has trained him to think like an outsider, which can be a particularly valuable skill in investing.

Menashe **Shemesh** + *Uriel* **Geller**

Volatility alpha generation through multiple market regimes

Menashe Shemesh, Chairman and
Uriel Geller, CIO
Granite Alternative Group
Herzeliya, Israel

Israel-headquartered Granite Alternative Group has reached an inflexion point in the growth of its business: augmenting the team, adding new strategies for additional diversification and return optimisation, and rolling out multiple distribution routes to make the strategy accessible to a wider investor base.

Granite is a systematic manager seeking inefficiencies in derivatives markets. The award-winning flagship fund, Granite Alphen Capital Fund (GACF), has generated positive performance in all calendar years since inception in 2013, realised a Sharpe above 1, and is highly ranked in multiple databases.

The two founders have been trading options for more than 20 years, having started out making markets in options before pivoting the firm to asset management. Shemesh established Israeli options proprietary trader, Granite Financial Instruments Limited, in 2003 and Geller joined in 2004, having previously made markets in US options at Bear Wagner in New York. The firm started developing investment models in 2009 and tested them between 2010 and 2012 before accepting external capital in 2013 and ceasing the market making.

Their multi-strategy approach to some degree switches between risk on in stable markets and risk off in volatile markets. The flagship strategy now trades listed derivatives on equity indices, volatility, fixed income and ETFs, in the US and Europe. Since launching in 2013 with a weekly premium collection strategy, GACF has steadily broadened its suite of strategies, to include sector spreads, VIX futures and options, index collars, equity calls, and calendar spreads as well as strategic hedges and tail hedges. GACF now includes eight derivatives strategies, of which three are positively correlated to equities, three negatively correlated, and two neutral. Some strategies are long option premiums while others collect premium income, as well as a blend of bullish and bearish strategies.

Well established inefficiencies

At the simplest level, the strategies are based on well-known market anomalies, which have been well documented by decades of data. They include the volatility risk premium: the fact that implied volatility is higher than realized volatility most of the time and skew, which sees puts nearly always more expensive than calls in equity markets. Calendar spreads have also displayed some repeated historical patterns, such as mean reversion in the term structure as it swings between contango and backwardation.

Uriel Geller Menashe Shemesh

Granite's real skill lies in how these strategies and trades are structured, risk managed, rebalanced, executed and combined in appropriate proportions to strike balances between income, protection, upside and downside under different market regimes and scenarios.

Accelerating research and innovation drive

The original strategy, selling weekly equity index premiums, was the main strategy between 2013 and 2017 and it remains the largest allocation within GACF, which is overall earning some theta or premium income in net terms, yet retains long volatility exposure.

Sector spreads were added in 2018, VIX futures and options in 2019 and index collars in 2020. In 2021, the pace of strategy diversification and innovation accelerated, with three strategies added: equity calls, calendar spreads and additional strategic hedges. This was aided by a growing research team: "Historically, the traders did research but in the past few years dedicated programmers have been hired. The R&D effort has been ramped up with a number of in-house programmers. We have about a terabyte of exchange data and have developed very efficient backtesting query tools," says Geller.

The strategy additions are partly designed to raise the return target and slightly increase volatility, but also to make the strategy even more resilient to crises and corrections: between 2013 and 2018, drawdowns during equity market pullbacks peaked (in August to September 2015 and 4Q 2018), but since 2019 the drawdowns have become smaller – and the strategy has even profited during some equity market setbacks, such as March 2020, and the first half of 2022.

"We added new strategies to cope with different scenarios and environments. Our aggregation of strategies is quite balanced, especially in distressed situations. Each one captures different segments and scenarios so that the total blend is balanced and fairly neutral. Correlations between the strategies remain low and stable. The result gives low volatility and low correlation," says Shemesh.

Granite is constantly searching for new strategies, though there is no specific target for how many to add: "It all depends on whether the R&D generates a good strategy with a low correlation," says Geller.

Existing strategies could be applied to new markets that are sufficiently liquid and operationally accessible. "Some markets, such as UK weekly options, are not liquid enough, while others, such as Asian options, would need more operational work," says Geller. Commodities are being researched as well.

Versatile strategy suite

Drilling into some of the sub-strategies, the VIX index of implied volatility in US equities can be traded with a long or short bias, or indeed on a neutral volatility basis, and directional positions are generally paired with an S&P 500 hedge in the opposite direction.

GACF as a whole usually has some modest delta-adjusted long exposure to equity markets, but this is also balanced against portfolio protection on the downside. Tail risk hedges can include out of the money call options on the VIX, and out of the money put options on the S&P 500. There is also some active trading of short S&P 500 futures to manage short gamma risks. The degree and type of hedging is optimized using proprietary models.

The equity markets in 2022 have seen a violent shift from growth to value investing, and Granite can exploit these sorts of trends. A long/short sector strategy uses US sector ETFs for industries such as utilities, healthcare, staples, industrials, retail and materials, to express relative value views on intra-market dynamics in terms of defensive versus cyclical sectors.

All of the strategies, including some of the tail hedges, are profit centers, which have positive average annualized returns. They also have strong risk management in isolation: standalone drawdowns have generally been less than one standard deviation of their standalone volatility for each one. The overall GACF strategy volatility is reduced because many of the pairwise correlations amongst the eight strategies are low, near zero or negative.

R&D drives evolution and innovation

In addition to rolling out new strategies, Granite is constantly fine tuning, honing and refining existing ones. "For instance, the sector spreads strategy has moved from long/short implementation to using put options," says Geller.

The research process pays careful attention to data quality and data segmentation, identifying the relevant indices and volatility regimes for the task. Models are painstakingly built and backtested, and Granite cautiously expect to see live performance in pilot programs close to the backtest before allocating to a new strategy.

Multi-faceted risk management

There are multiple levels and layers of risk management. The portfolio construction amongst the eight strategies inherently controls risk by including a mix of low and negative correlations. The predominant use of option spreads also places caps and ceilings on maximum losses, and beyond that there are systematic protocols for stop-losses. There are also dynamic controls on position sizing, delta exposures, and exposure limits per strategy, asset and asset class.

Granite has developed its own tools for risk management and stress testing, with a focal point of overnight and after market risk monitoring for gap risks. Tail hedges provide another backstop. Margin requirements overall are typically low, which is comparable to many systematic strategies such as CTAs, and lower than some relative value arbitrage strategies, which can be margin intensive.

Execution efficiency blends man and machine

Most of the strategies are rebalanced weekly, but some of them such as equity calls and collars could be rebalanced monthly or quarterly. Trading is partly done through direct market access (DMA) electronic platforms, but there is also some need for high touch, voice execution, which can include negotiating block trades with prime broker, Societe Générale, and four other brokers in Europe and the US, which give up trades to SocGen. Granite also has access to extended hours platforms for trading outside normal market hours. Granite has dedicated option traders who each have more than ten years' experience.

Delta hedge execution is fully automated, but most of the execution is not automated. "Our human traders are especially useful because bid/ask spreads on options can be wider than on equities or futures, and there can be less liquidity in out of the money options. We like to think of the strategy as a 'grey box': all systematic investment decisions are model driven, but execution allows limited discretion over time windows," explains Geller.

Scalable global roll out across vehicles, platforms, and domiciles

All assets are in listed, exchange-traded instruments which have transparent market prices and most of the book is in options with below one week maturity. The portfolio could be liquidated in hours. This, combined with strong operational infrastructure, helps to make the strategy very scalable: Granite estimate that a few billion dollars could be run.

In early 2022 Granite hired Julien Assous as the Group's CEO. Assous was previously CEO of Migdal Investment Banking, and earlier CEO of IBI Brokerage, one of the biggest brokers in Israel, and has been a Director of the Tel Aviv Stock Exchange. Assous is focused on broadening Granite's strategic collaborations, as well as building a distribution network locally and globally.

Granite started with a Gibraltar structure, which benefits from Gibraltar's dual regime, which can be AIFMD aligned, but also allows an opt-out of AIFMD. Granite already runs tax neutral Cayman and Delaware structures and is actively looking at other fund domiciles and multiple end markets. "Some Swiss Franc hedged certificates have been structured for the Swiss market, with one for retail and one for institutional investors, reflecting local market preferences," says Assous.

Granite work with placement agents in Israel and Switzerland, and could be open to other such relationships elsewhere, if the right fit is found: "We would rather work with platforms that actively promote funds than those that just passively list them on the platform," says Assous.

Hitherto, the strategy has only been invested in by sophisticated investors, but there is potential to accept retail investors in some domiciles: "The regulator in Israel announced its intention to launch a liquid alternatives structure, which combines a hedge fund and a mutual fund, and we expect to work with strategic institutional partners to launch the strategy in this wrapper. We would use the same know-how but might structure a slightly different risk reward for retail investors," Assous adds.

Granite is also exploring the possibility of launching a UCITS for the European market.

Geographically, China and Hong Kong are interesting markets and closer to home in the Middle East. Dubai now has a new relationship with Israel – a free trade agreement signed in May 2022 – that could help to expedite a distribution deal.

Customisation

There are already separately managed accounts, which can offer potential for customization. Investors can mix and match amongst the strategies, and four of the eight already have standalone share classes. Granite has the operational structures and technology to facilitate this sort of customization. "It is very easy for us to offer a menu and execute on the calculation and modelling side," says Geller. Other bespoke options include levels of leverage. "It is all adjustable, that is the beauty of trading derivatives," says Shemesh.

Pan Yiannakou, CEO and
Charlie Drew, COO
Swarm Technology™
Cyprus and London

Pan Yiannakou + *Charlie* Drew

Insect-inspired trading system generates uncorrelated returns

TRADE LIKE A COLONY. NOT LIKE AN ANT.

Pan Yiannakou and Charlie Drew, Swarm's pioneering founders, dared to think differently and have developed a unique systemic trading program inspired by the behaviour of ants. Their Swarm XVI™ program has delivered a 60% return in its first 3 years of live trading with a Sharpe Ratio above 1 (1.35 net), won multiple industry awards and is seeing its assets under management rapidly scale.

The Swarm XVI™ program's 2021 performance earned it the Best Performing Fund in 2021 in the AI Multi-Asset Strategy (AUM < $100m) category at *The Hedge Fund Journal* CTA and Discretionary Trader Awards 2022. "We expect a Sharpe of 1 is realistic over the long run, while acknowledging that recently increased market volatility could have increased the informational value of price data that generates the signals, thereby allowing us to outperform," says Swarm CEO Pan Yiannakou.

The Swarm program is not structurally countertrend – it switches between trend, countertrend and dormant positions in individual markets – but it is clearly doing something very different.

Yiannakou previously ran up to $2.5 billion in managed futures as part of Man Group's associated manager program starting in the late 1990s. After leaving Man Group, Yiannakou spent some years developing a technology for high-definition digital printing on leather, which was licensed to a global multi-national in 2017. Once this project was concluded, he sought a new challenge and reconnected with long-time family friend, Charlie Drew, to explore an insect-inspired trading strategy. Drew co-founded Swarm Technology with Yiannakou and is the company's COO.

Biomimicry and ants

Drew has for years been researching biomimicry applications including turbine blades modelled on humpback whale fins. Drew has written on the topic, including a 2019 published paper: *From Maggots to Millions: Biomimicking the Fly to Feed Humanity from its Waste in the 21st Century*. One branch of biomimicry is swarm intelligence, which has applications in the military, robotics, telecoms and communications areas. It is this natural way of thinking on which the Swarm XVI™ trading program is based. "I became fascinated with how insects share information through pheromone trails and other means of communication, swapping and sharing information and allocating tasks. Insects' ways of organizing work avoid the behavioural greed and fear biases of mammalian society and indeed the investment world. Ants were chosen specifically as our inspiration because they are equally sized, allocate roles in colonies and share information for interchangeable functions, working towards collective welfare. Simple agents interact locally based on simple rules. This produces a remarkable intelligence amplification effect," says Drew. Human brains have 87 billion neurons, 3D view, effective memories, the ability to problem solve and to learn. Humans have the capability to survive and prosper as individuals. Ants only have a few hundred thousand neurons; they can only process in 2D view, have no memory, cannot learn or problem solve as individuals. They have no individual intelligence. "Ants cannot make decisions, survive or prosper alone. They require a different approach to problem solving. The Swarm XVI™ program is inspired by this mechanism for amplifying intelligence. This way of analysing information and making decisions is completely different from the traditional approach of trading rooms, which falls prey to behavioural biases," says Yiannakou, who developed the code.

Mixed methodology

Upon returning to the investment industry, Yiannakou originally considered some form of revamped trend following, but a fascination with natural decision-making systems led him to follow this radically different framework – though a sophisticated medium term trend following indicator is the foundation, this is modulated, neutralized or reversed by signals derived from the Swarm Matrix™.

The systems might sometimes add to a winning position or might take profits on a trend following trade before any signs of the trend reversing. They can also go flat. "Some of the systems are deliberately intended to be dormant or resting, perhaps waiting for the right opportunity. In the same way, at any point in time, 20% or so of ants in a colony are resting," says Drew.

Benchmarking and objectives

Given that the system moves between trend and countertrend, it may make sense to use a variety of performance benchmarks in addition to traditional trend-dominated CTA indices. In common with other CTAs, the strategy is intended to provide absolute returns regardless of conventional market moves. Recently, there has been a negative equity market correlation, although this is not a design feature.

Robust backtesting

The strategy's three-year live Sharpe Ratio, between July 2019 and June 2022, has been above its backtest, suggesting that the simulation methodology was robust with no curve fitting. Swarm takes care to avoid "optimisation", in terms of variables such as signals or markets traded.

For example, one price datapoint per day is used. "Open, close, high and low intraday price data might add some marginal value, but it also carries the risk of curve fitting by adding parameters. Computer power makes it exceptionally easy to curve fit, especially with data that is not independent. We would rather keep parameters as fixed and/or as limited as possible," Yiannakou explains. And the same models apply to all markets, to maintain a diversified mix of asset classes and markets rather than base allocations on performance over a certain period. Swarm currently trades 16 liquid markets, with four drawn from each of the four asset classes of equity indices, currencies, commodities and interest rates. Asset class performance attribution naturally moves around. For the first 18 months, corn was one of the worst markets but over the past year it has become one of the best. So far commodities overall have contributed most, followed by equities and currencies with interest rates detracting from returns. Some models might upsize the outperformers and downsize the underperformers, but Swarm would view this as counterproductive. "We view adding and deleting markets in response to recent performance as over-optimising, and the long run backtest proves the benefit of the four asset classes," says Drew.

Moreover, analysing asset classes in isolation oversimplifies the interconnectedness of markets: "The interest rate markets' conversations with the other asset classes informs other system trading parameters," says Drew. "All markets contribute to the information, even if they do not all contribute to positive performance."

The Swarm Matrix™

These inter-relationships are modelled through a Swarm Matrix™ of 16 markets, which generates 65,535 connections or new data points. There are four matrices used to generate the trading signals; in effect 16 data points are converted to over 260,000 through the Swarm effect.

Two of the matrices are based on internal program data – the strategy's position and performance – while the other two, momentum and volatility, are independent of the program. The only external data is the 16 prices sampled once a day.
The Swarm XVI™ program does not contain any correlation calculations; "Though the model is aware of historical interactions which includes correlations," concludes Yiannakou.

There are essentially three trades: trend, countertrend or flat/zero, and the balance amongst them varies more in the short term than the long term. "Over the 15 year backtest the models were evenly split between the three positions, but there could be much more variation over 3 months," explains Yiannakou. Incidentally, any spread trades between the markets are accidental: "The combination of trades might sometimes look like an arbitrage or relative value trade, but this is not intentional," he adds.

Computer power and investment universe growth

The number of markets traded is relatively small, partly because the nature of the models means that a larger matrix would require gargantuan computer power. "We run seven million calculations a day to generate a set of trades across the 16 markets we trade," says Yiannakou. "Increasing the number of markets increases the number of connections exponentially; at 32 markets it would run into hundreds of millions and at 64 it would be trillions of calculations for which we would need NASA level computer power," explains Drew.

Therefore, it is most likely that Swarm will expand its investment universe through parallel programs with partial overlaps as markets are added. "In an ant colony one million ants do not all talk to each other but connect directly with their neighbours. The information spreads via small groups like a Mexican wave in a sports stadium. Our current research is based on parallel expansion along with improved risk management and trading efficiency," explains Yiannakou.

A slow to medium frequency system

Though the system carries out a great many calculations daily, these however feed into a small number of trades. "The Swarm XVI™ program runs calculations once per day, but using a time sequence series, so that the longest lookback is one year and weightings within the matrix change quite slowly based on rolling one year data. Risk management uses a 34-day volatility lookback to try and equalize the dollar risk of the 16 markets traded," says Yiannakou. Daily trades are more often position size tweaks than binary shifts in direction: "The average holding period is 17 or 18 days defined by the direction of a trade, but the position size can change more often with volatility and multiplier data," he explains.

With 3,000 round turn trades per million dollars a year, trading costs are kept low. Slippage is controlled by seeking high volume trade times. "Algorithmic execution, and staggered trading multiple times per day, could be added as assets grow and when the need arises," says Drew.

Is this AI?

The Swarm XVI™ program has elements of artificial intelligence; a 'network', weightings, parameters that change based on past results. But it is not a fast mechanism with a feedback loop. There is non-specific pattern recognition.

"There is machine learning… but it is very, very slow in comparison to what is normally understood to be ML. It might be more accurate to say the program 'evolves' rather than learns. You could say the Swam XVI™ program is an example of Machine Evolution (ME) rather than ML," says Yiannakou. "We are not optimizing based on previous patterns. Our weightings change much more slowly than traditional AI. We are not trying to mimic human intelligence. It is rather a completely different way of thinking and decision making," underscores Drew. "This is how an ant colony survives. Through very gradual adaptation. Human intelligence is orders of magnitude faster, which may in the end be as much of a disadvantage than an advantage. After all, insects have been around for many millions of years longer than humans and may well survive long after we are gone," adds Drew.

Mechanical, discretionary and client-specific risk management

There are four layers of risk management. Level one is the internal adjustments of positions on a weekly basis. The additional levels are designed to protect assets against market dislocations and extreme events.

The second layer sees the model mechanically de-gear down to 75%/50%/25% exposure about 6 times a year, for up to a week, when various indicators are outside normal historical ranges. "The dashboard of indicators, which could include absolute and relative levels of price action and volatility, draws some inspiration from Drew's pilot's license, which he obtained before his driver's license," points out Yiannakou.
The third layer of risk management might reduce risk on an intraday basis. "Discretionary risk management simply pre-empts stop losses and other risk management triggers by exiting before stops are reached. This pre-empts other measures for a few hours, and is not designed to add performance," says Yiannakou.

The fourth level of risk management is for individual users to determine. Hard stops are agreed with clients, who also determine their preferred level of leverage and trading account sizes. Margin stress tests assume peak margin to equity at 35% of notional.

Service providers and structures

Assets under management are currently held in managed accounts and a Cayman domiciled fund is planned for launch in 2023.

The strategy went live with an initial family office allocation in July 2019, before being opened to external investors. Now entering its fourth year of live trading it has rapidly attracted assets under management in 2022 and now has assets of over $64 million, having garnered mandates from US, European and UK institutions. Capacity is estimated at $1 billion plus.

Most operational functions are outsourced to Privium's platform, which has over 30 clients and several billion of assets (including some managers who have featured in previous editions of *Tomorrow's Titans*). There are currently three principal brokers, in Europe and the US.

Swarm Technology uses a fundamentally different way of thinking. Whereas AI tries to mimic mammalian intelligence and problem solving, Swarm takes a very different insect-based approach. The financial markets in 2022 have utterly upended some strategies that flourished for decades before. Perhaps the time is right for a new way of thinking in these turbulent times.

Past performance does not predict future results and the capital value of investments and the income generated can fluctuate.

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